CELL / MODEL NAME	DESCRIPTION	DATE
OS-A-1	General plan and elevation, aluminum truss and steel supports	7/1/2006
OS-A-2	Aluminum truss details for truss type I-A, II-A & III-A	7/1/2006
OS4-A-2	Aluminum truss details for truss type I-A, II-A & III-A	7/1/2006
OS-A-D	Damping device	7/1/2006
OS-A-3	6" Dia. pipe support frame for type I-A aluminum truss	7/1/2006
OS-A-3A	6" Dia. pipe support frame details	7/1/2006
OS-A-4	8" Dia. pipe support frame for aluminum truss	7/1/2006
OS-A-4A	8" Dia. pipe support frame details	7/1/2006
OS-A-6	10" Dia. pipe support frame for aluminum truss	7/1/2006
OS-A-6A	10" Dia. pipe support frame details	7/1/2006
OS4-A-8a	12" Dia. pipe support frame for type III-A aluminum truss	7/1/2006
OS4-A-8aA	12" Dia. pipe support frame details	7/1/2006
OS-A-9	Aluminum walkway details	7/1/2006
OS-A-9-DMS	Alternate aluminum walkway details for DMS	7/1/2006
OS-A-9S	Alternate steel walkway details	7/1/2006
OS-A-10	Aluminum walkway details	7/1/2006
OS-A-10-DMS	Alternate aluminum walkway details for DMS	7/1/2006
OS-A-10S	Alternate steel walkway details	7/1/2006
OS-A-11	Aluminum handrail details	7/1/2006
OS-A-11-DMS	Alternate aluminum handrail details for DMS	7/1/2006
OS-F1	Foundation details (6" dia. pipe, spread footing)	7/1/2006
OS-F2	Foundation details (8" dia. pipe, spread footing)	7/1/2006
OS-F3	Foundation details (10" dia. pipe, spread footing)	7/1/2006
OS-F4	Foundation details (12" dia. pipe, spread footing)	7/1/2006
OS4-F1	Foundation details (6" dia. pipe, drilled shaft)	7/1/2006
OS4-F2	Foundation details (8" dia. pipe, drilled shaft)	7/1/2006
OS4-F3	Foundation details (10" dia. pipe, drilled shaft)	7/1/2006
OS4-F4	Foundation details (12" dia. pipe, drilled shaft)	7/1/2006
OS4-MED	Median support foundation details	7/1/2006
OS4-MED2	Median support foundation details	7/1/2006

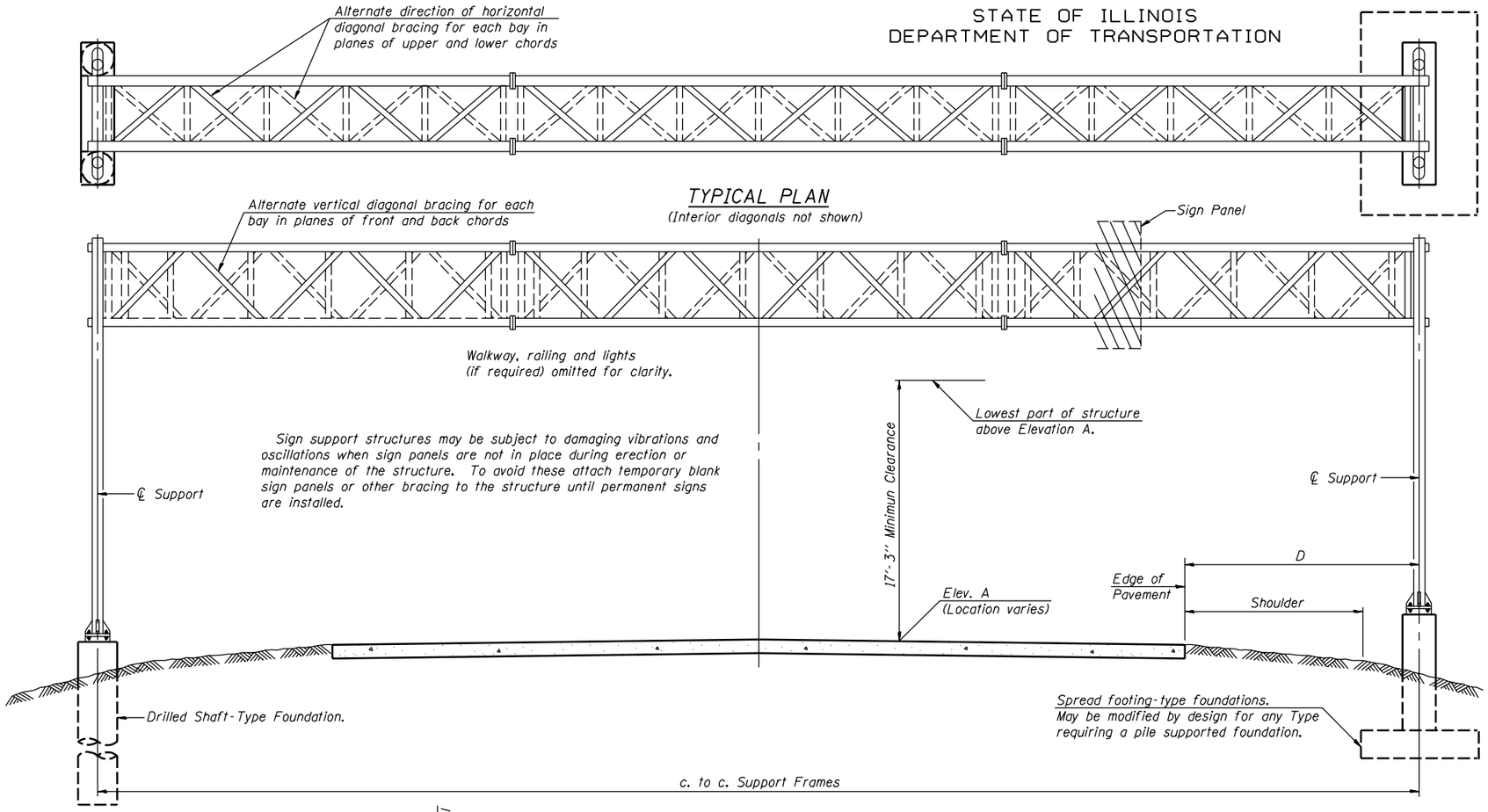
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

TYPICAL PLAN
(Interior diagonals not shown)



GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WIND LOADING: 30 p.s.f. normal to Sign Panel Area and truss elements not behind sign Loading Diagram.

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'_c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specificiations.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

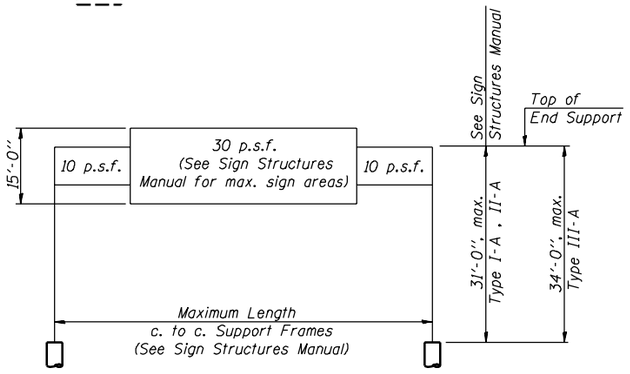
GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 36 or 55 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

TYPICAL ELEVATION
(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area

**Looking upstation for structures with signs both sides.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-A-1 7/01/2006

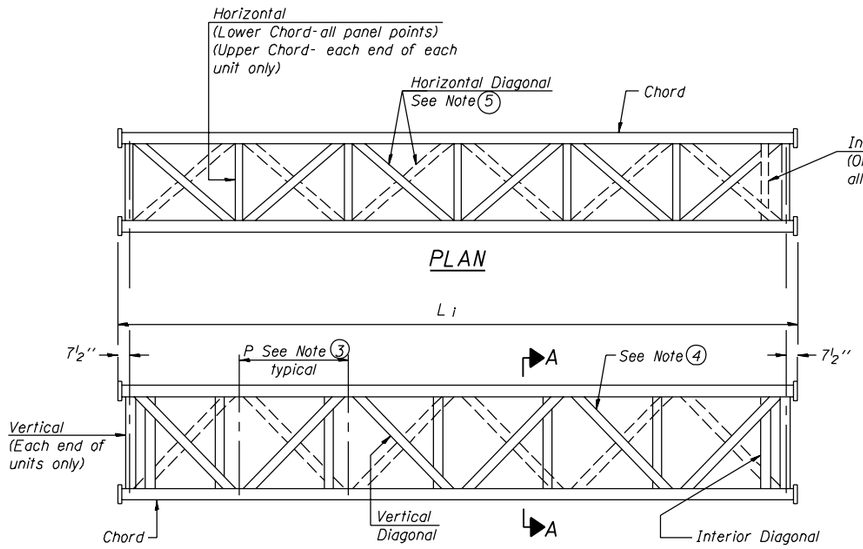
OVERHEAD SIGN STRUCTURES
GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL SUPPORTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

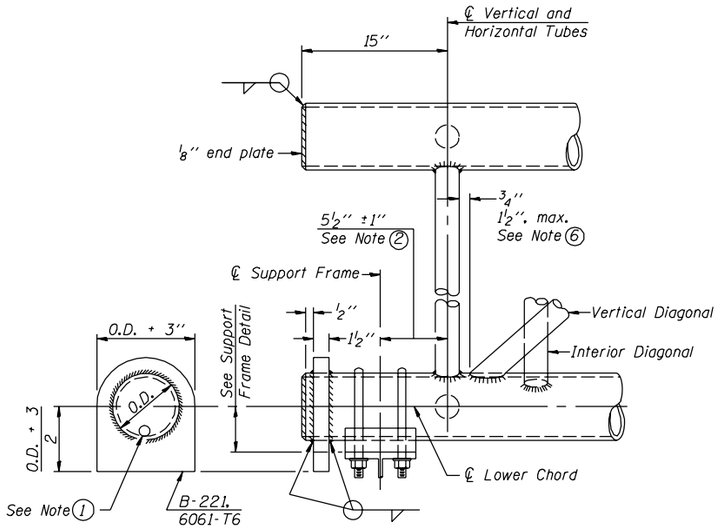
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

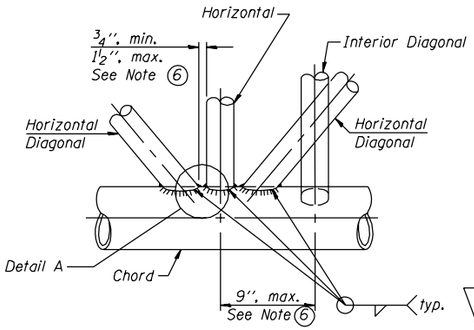
Contract #

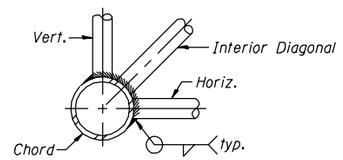


ELEVATION
TYPICAL INTERIOR UNIT
Even number of panels/interior unit required.

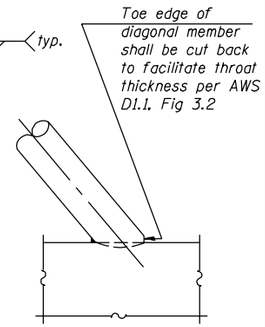


SUPPORT END DETAIL FOR EXTERIOR UNIT



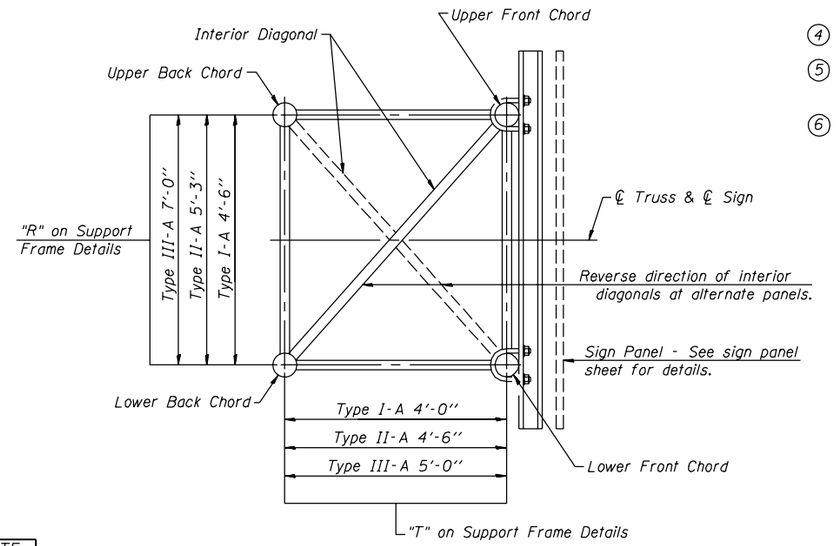


TYPICAL JOINT DETAILS



DETAIL A

ELEVATION
TYPICAL EXTERIOR UNIT
Even or odd number of panels/exterior units allowed.



SECTION A-A

NOTES

(1) Contractor may alternatively use standard aluminum drive-fit cap to close end. ½" ϕ drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)

(2) 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).

(3) Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.

(4) Vertical Diagonals in front and back face shall alternate.

(5) Hidden lines show wind bracing alternates direction between planes of top and bottom chords.

(6) All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a ¾" minimum to 1½" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

OVERHEAD SIGN STRUCTURES
ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-A-2 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

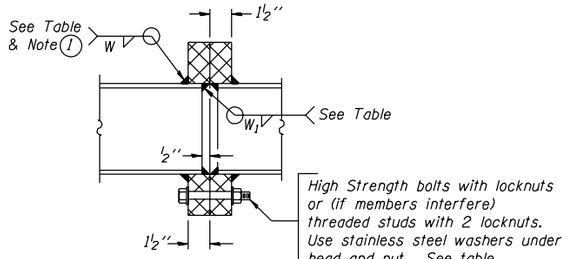
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #

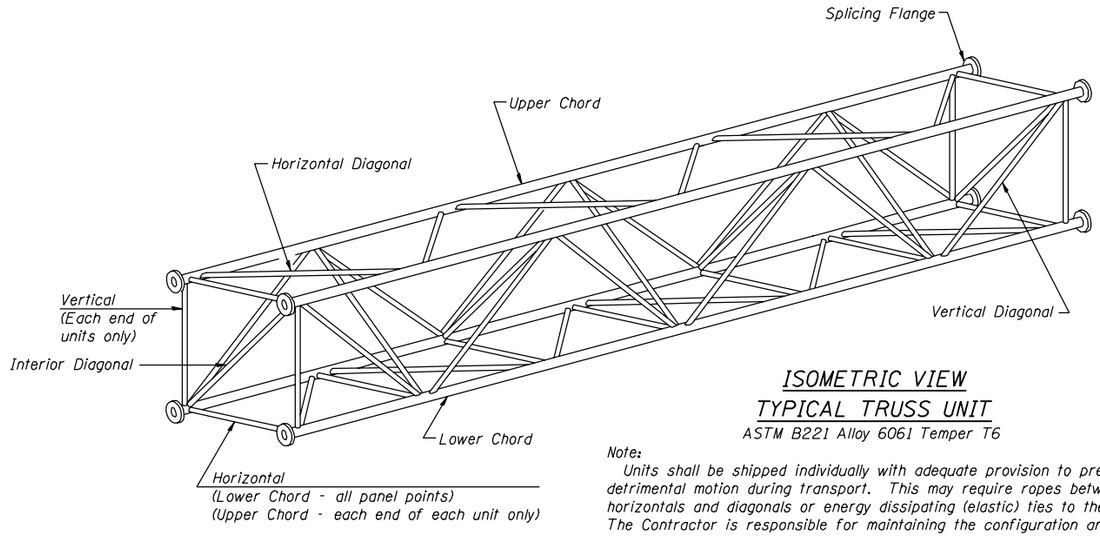
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L_e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L_i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W_1		



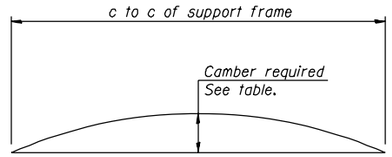
SECTION B-B

(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



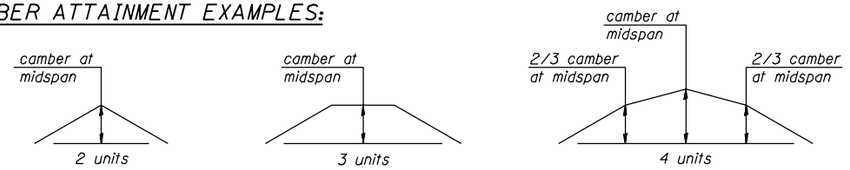
ISOMETRIC VIEW
TYPICAL TRUSS UNIT
ASTM B221 Alloy 6061 Temper T6

Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.

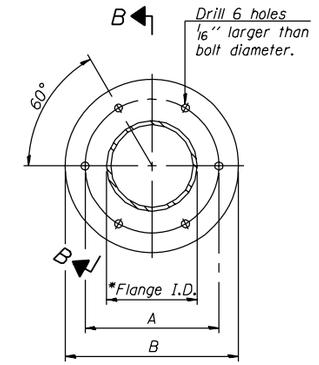


CAMBER DIAGRAM
Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

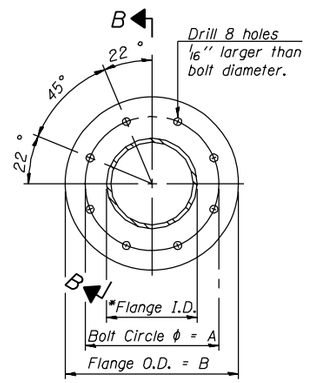
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-A, II-A, & III-A



TRUSS TYPES II-A & III-A

SPLICING FLANGES
ASTM B221, Alloy 6061-T6
or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16''.

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

OS4-A-2 7/01/2006

OVERHEAD SIGN STRUCTURES
ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

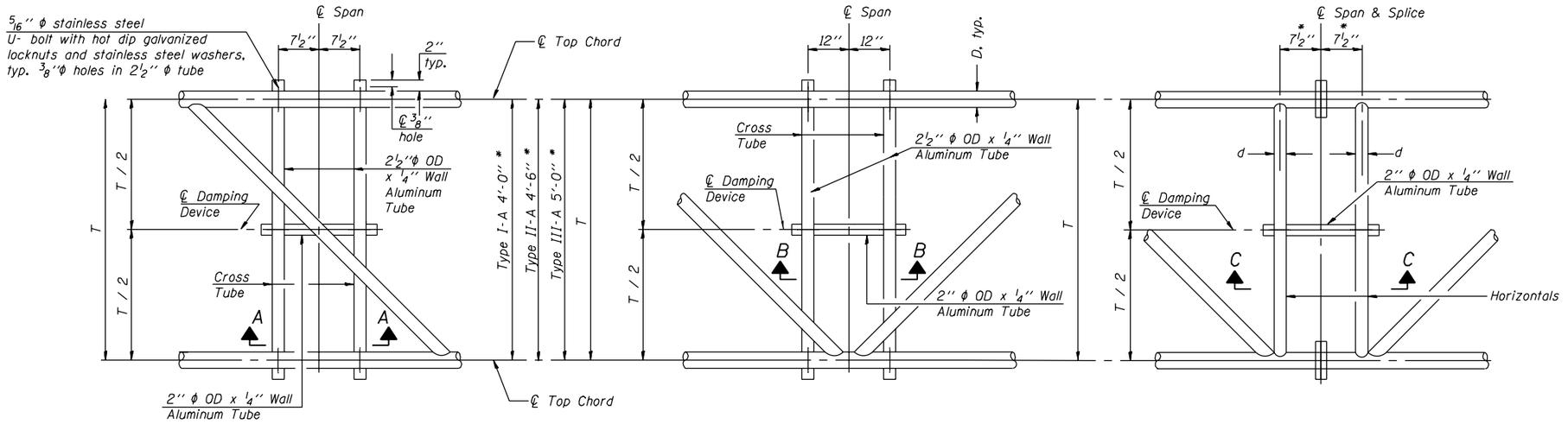
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

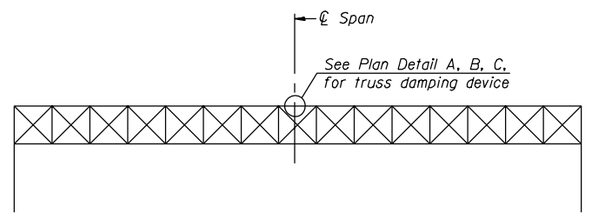
Contract #



PLAN DETAIL "A"
℄ Span between Panel Points

PLAN DETAIL "B"
℄ Span at Panel Point

PLAN DETAIL "C"
℄ Span at ℄ Chord Splice

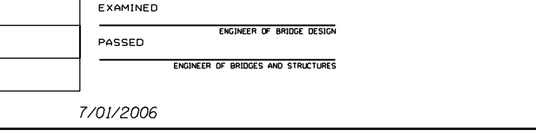


ELEVATION
Aluminum Overhead Sign Truss

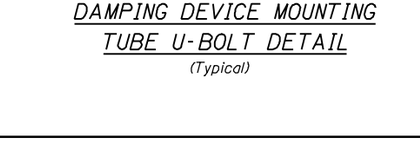
NOTES

Damper: One damper per truss. (31 lbs. Stockbridge-Type Aluminum) Cost included in Overhead Sign Structure...

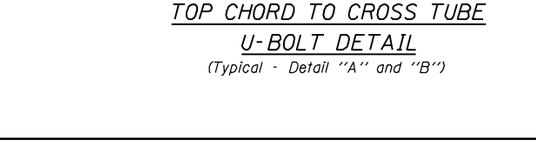
Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



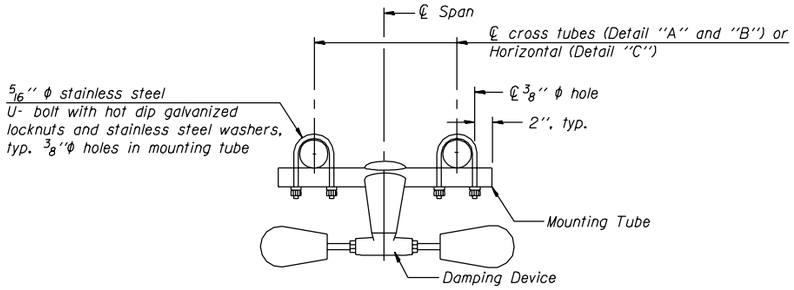
SECTION A-A



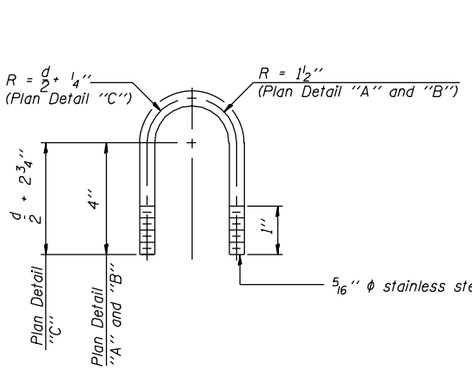
SECTION B-B



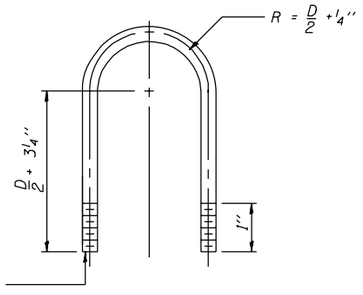
SECTION C-C



TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical - Detail "A" and "B")

OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

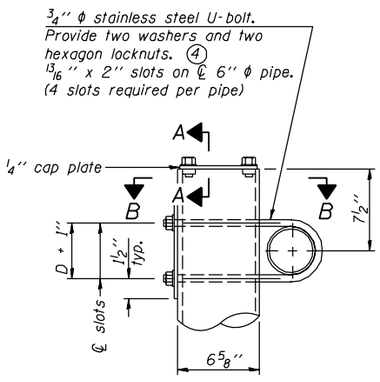
OS-A-D 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

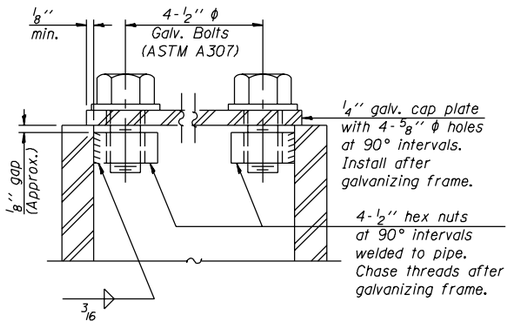
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

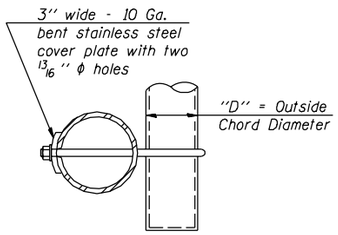


DETAIL A

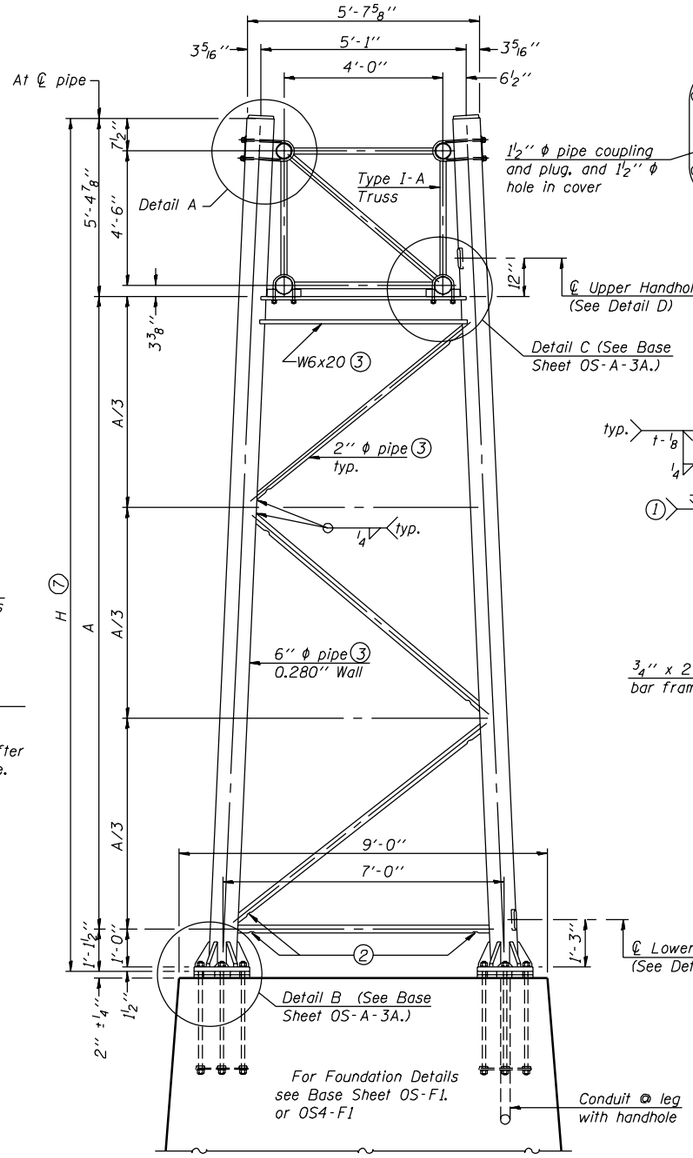


SECTION A-A

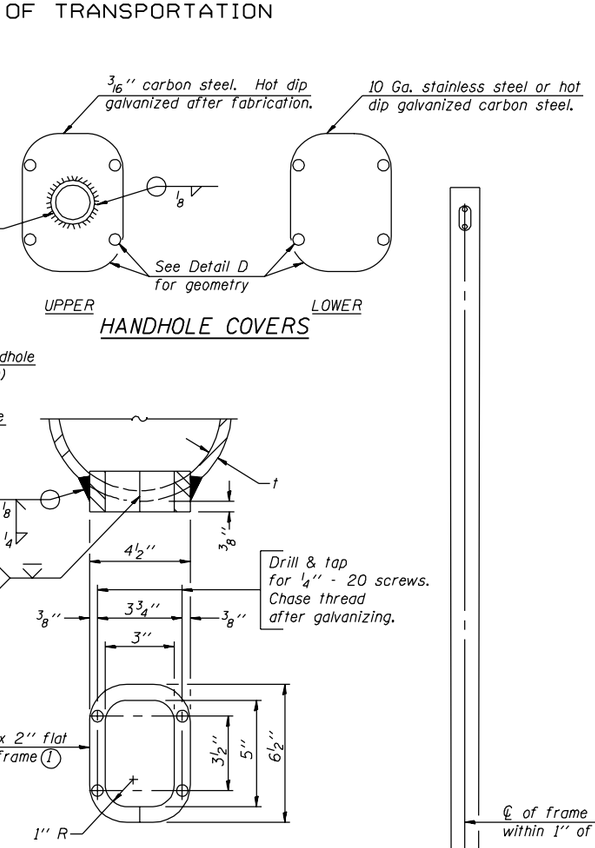
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION



HANDHOLE COVERS

Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D

END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.

(4) See General Notes for fasteners.

(5) This standard may be utilized for special short-span and/or short end support applications subject to verification of maximum loads and capacities by the designer.

(6) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(7) "H" based on 15'-0'' or actual sign height, whichever is greater.

Structure Number	Station	Support		H (7)	A
		Left	Right		

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

6''ϕ PIPE TRUSS SUPPORT DETAILS

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE I-A ALUMINUM TRUSS

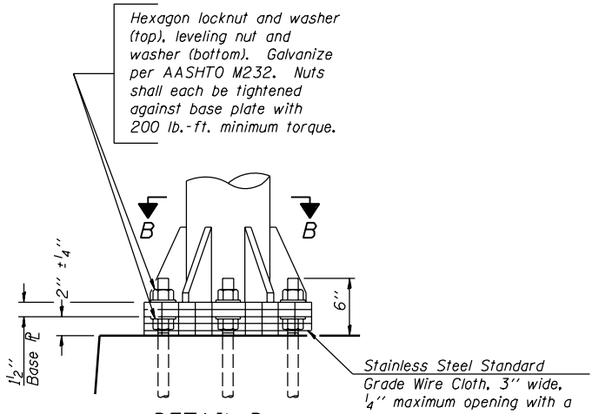
OS-A-3 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

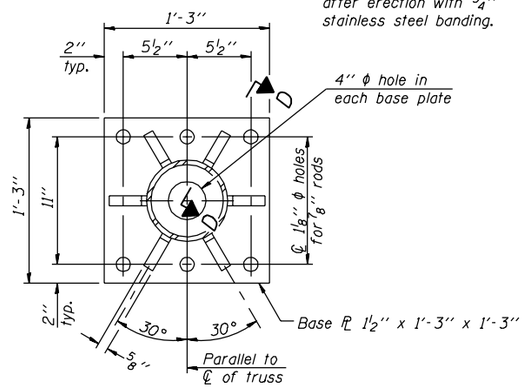
SHEET NO. -
- SHEETS

Contract #

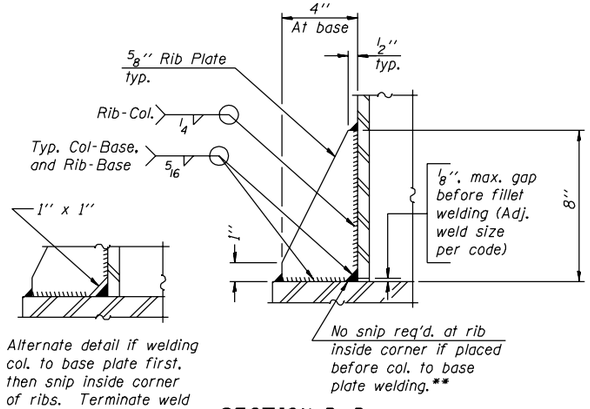


DETAIL B

Ribs shall be cut to fit slope of pipe.

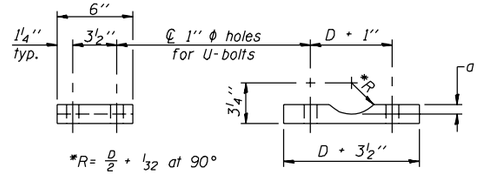


SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D



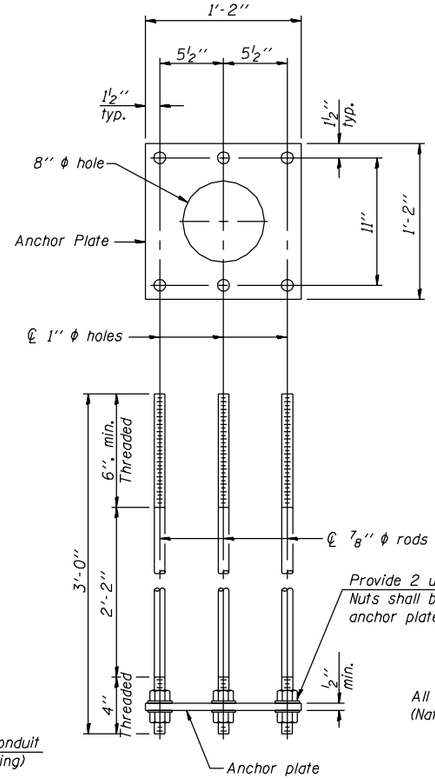
*R= D/2 + 1/32 at 90°

D = Outside Diameter of Chord.

SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

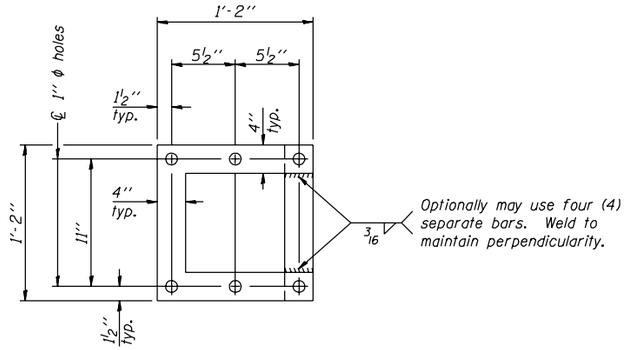
Truss Chord Nominal Dia.	a
4 1/2''	11/16''
5''	3/4''
5 1/2''	13/16''



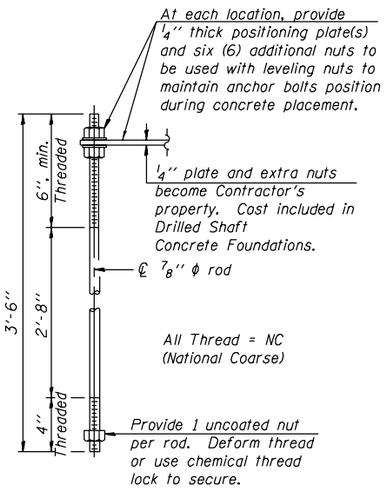
All Thread = NC
(National Coarse)

ANCHOR ROD DETAIL

Spread Footing Foundation



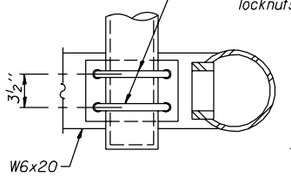
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

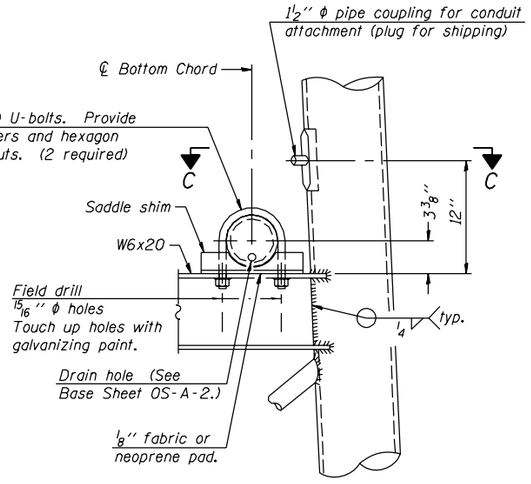
Drilled Shaft Foundation

Anchor rods shall conform to AASHTO M314 Grade 36 or 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C

(Handhole cover not shown)



DETAIL C

TYPE I-A TRUSS
6'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-A-3A 7/01/2006

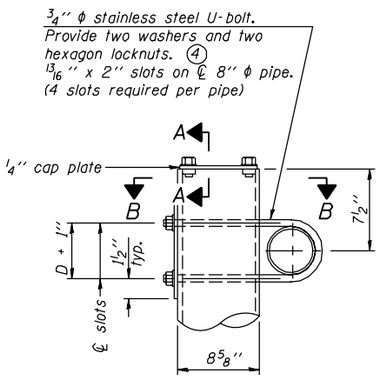
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

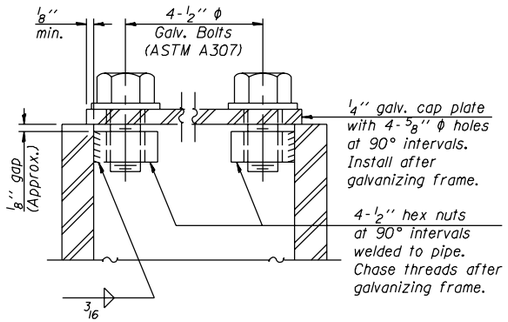
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

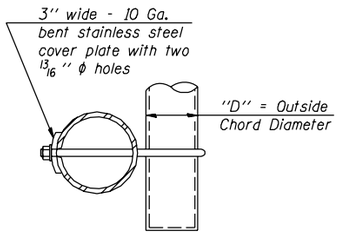


DETAIL A

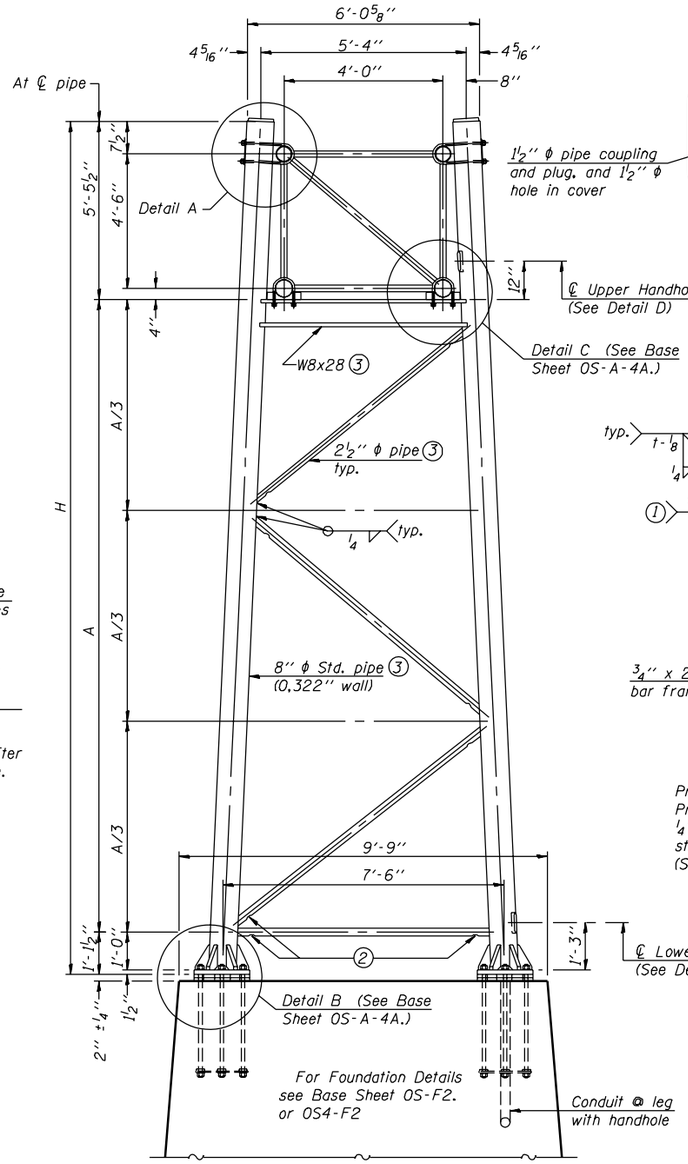


SECTION A-A

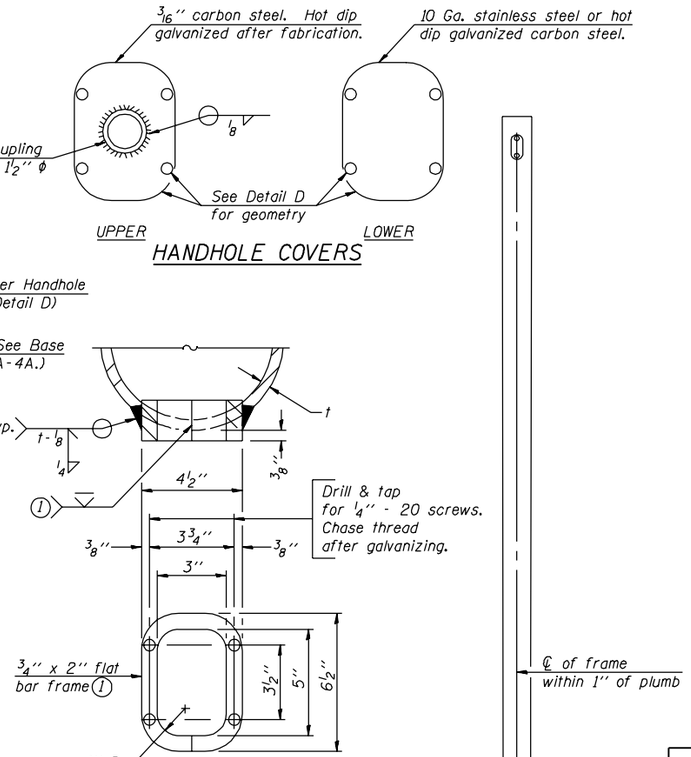
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION



HANDHOLE COVERS

Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D

END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

Structure Number	Station	Support		H (6)	A
		Left	Right		

8'' ϕ PIPE TRUSS SUPPORT FRAME

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

OS-A-4 7/01/2006

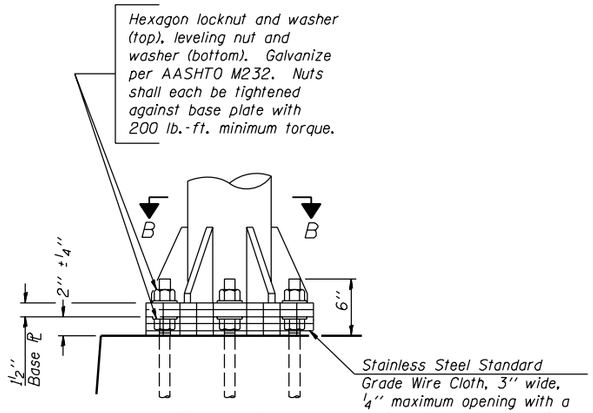
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE I-A ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

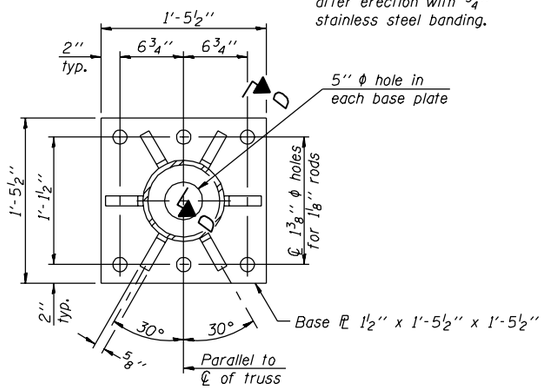
SHEET NO. -
- SHEETS

Contract #

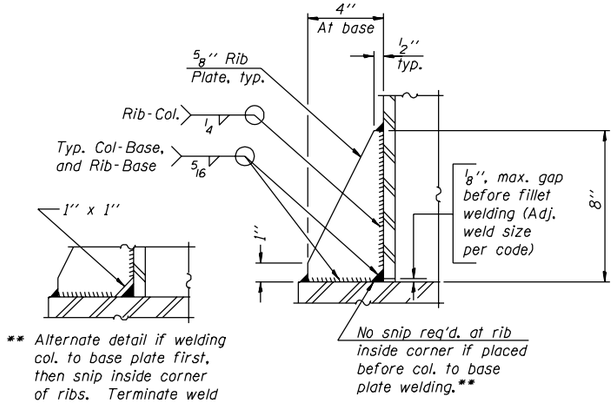


DETAIL B

Ribs shall be cut to fit slope of pipe.

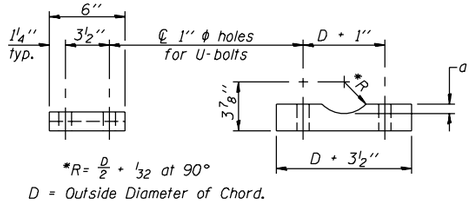


SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D



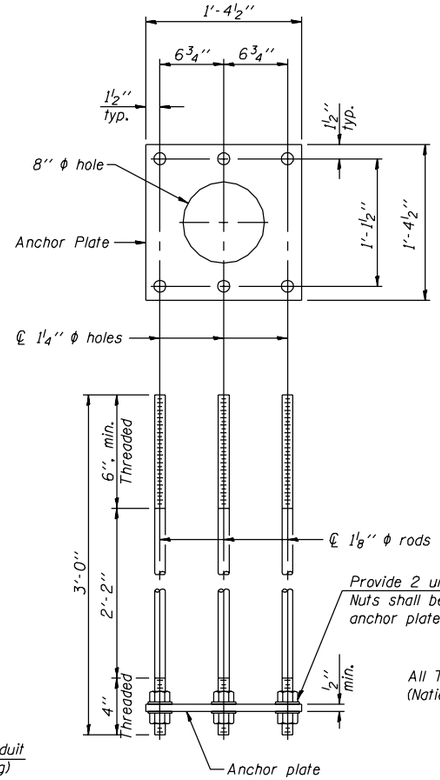
*R = D/2 + 1/32 at 90°

D = Outside Diameter of Chord.

SADDLE SHIM DETAIL

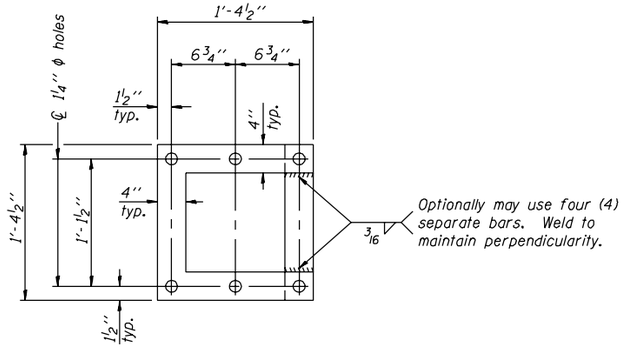
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

Truss Chord Nominal Dia.	a
5''	3/4''
5 1/2''	13/16''
6''	7/8''
6 1/2''	15/16''

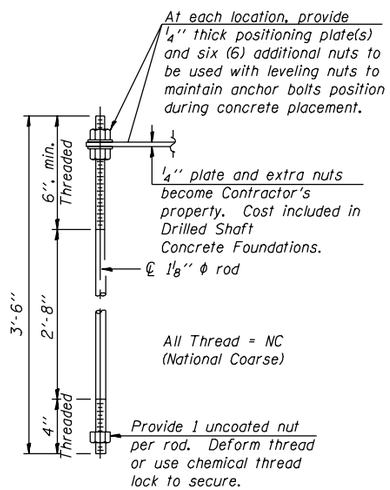


ANCHOR ROD DETAIL

Spread Footing Foundation



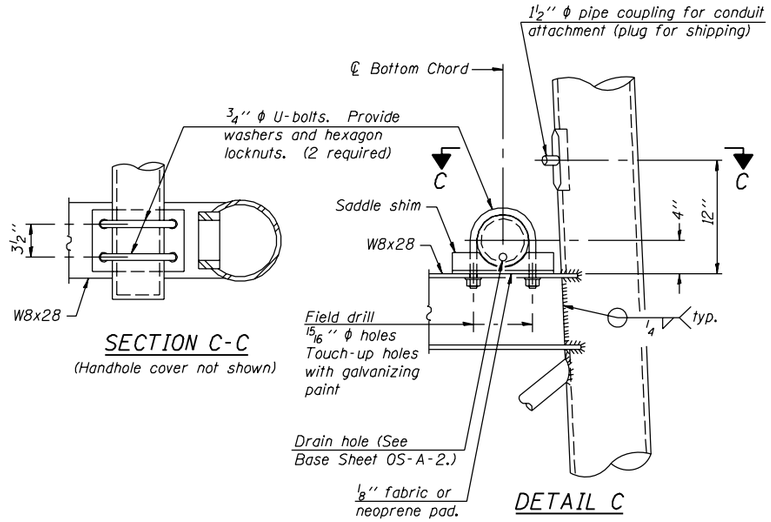
POSITIONING PLATE(S)



ANCHOR ROD DETAIL

Drilled Shaft Foundation

Anchor rods shall conform to AASHTO M314 Grade 36 or 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C

(Handhole cover not shown)

DETAIL C

TYPE I-A TRUSS
8'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-A-4A 7/01/2006

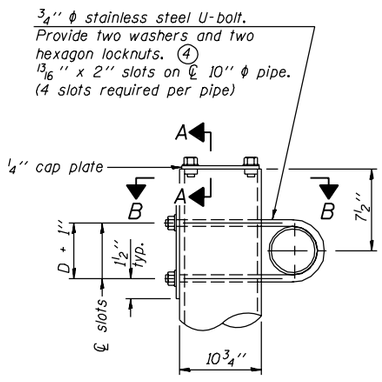
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

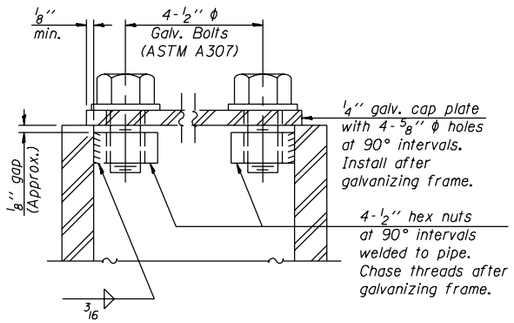
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

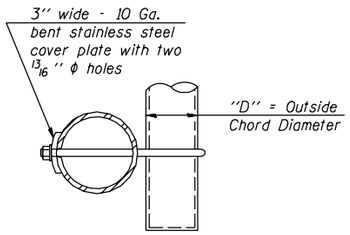


DETAIL A

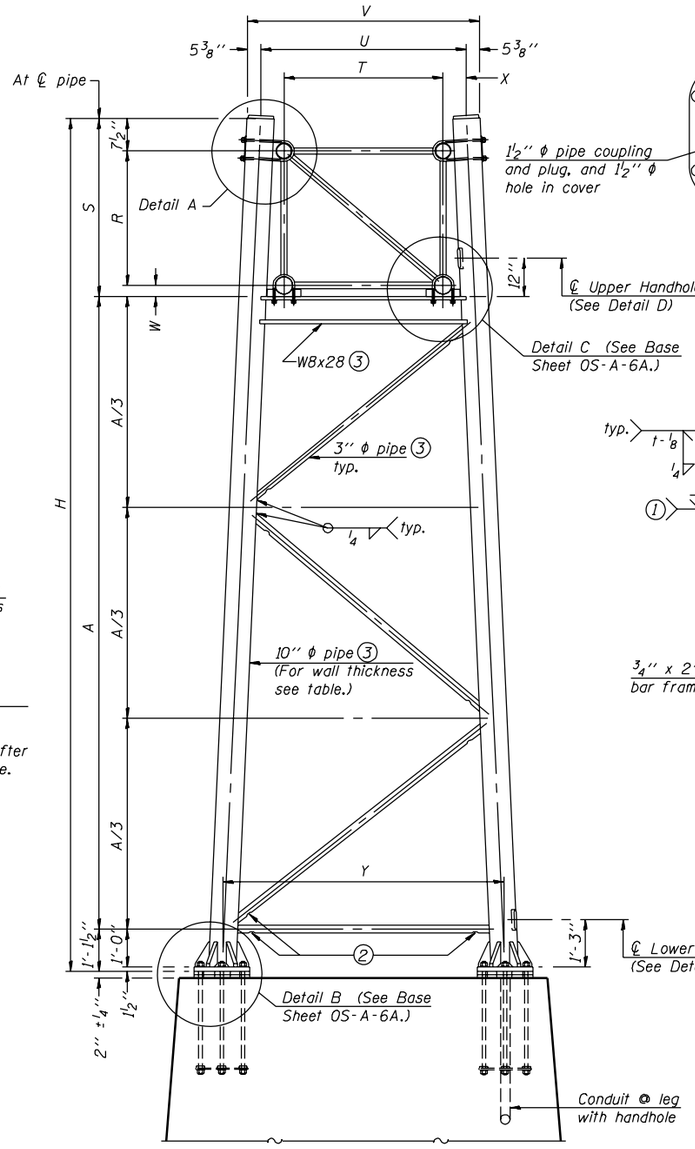


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.

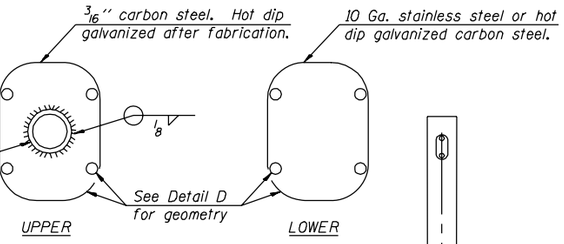


SECTION B-B

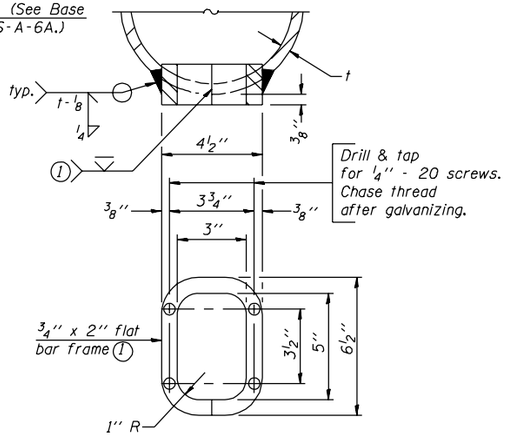


For Foundation Details, see base sheet OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

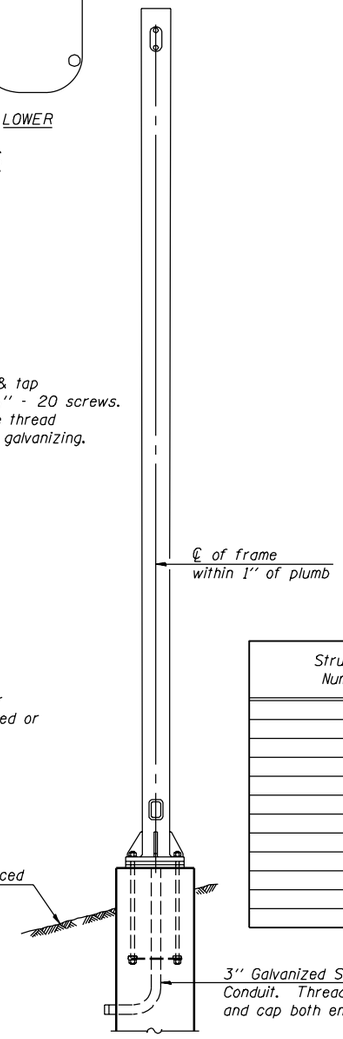


HANDHOLE COVERS



Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				

10'' ϕ PIPE TRUSS SUPPORT FRAME

Truss Type	Dimensions							
	R	S	T	U	V	W	X	Y
I-A	4'-6''	5'-5 1/2''	4'-0''	5'-6''	6'-4 3/4''	4''	9''	8'-3''
II-A (5)	5'-3''	6'-3 1/4''	4'-6''	6'-1''	6'-11 3/4''	4 3/4''	9 1/2''	8'-3''

NUMBER	REVISION	DATE

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-A-6 7/01/2006

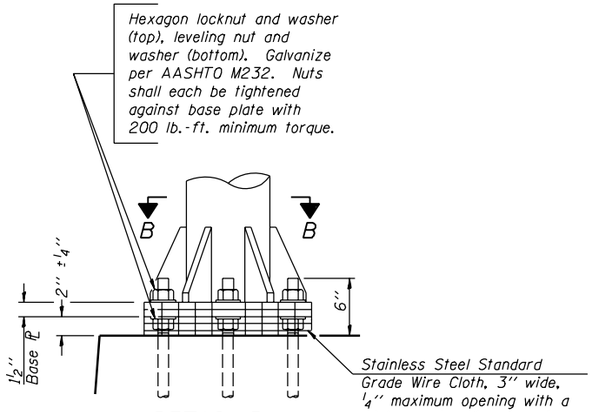
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

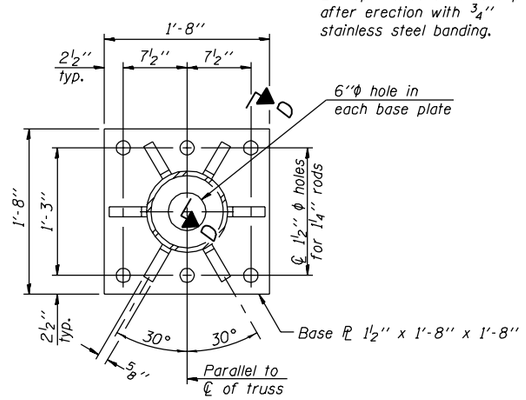
SHEET NO. -
- SHEETS

Contract #

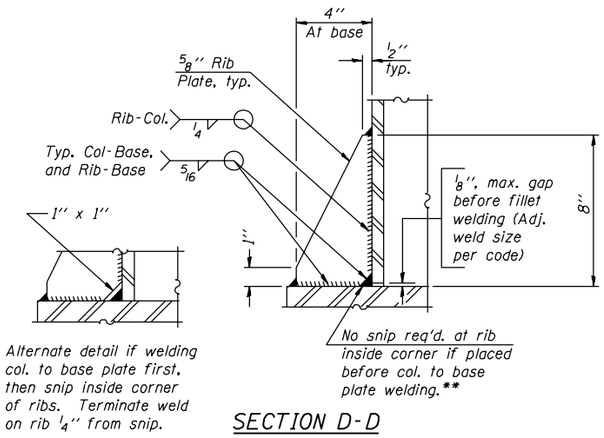


DETAIL B

Ribs shall be cut to fit slope of pipe.

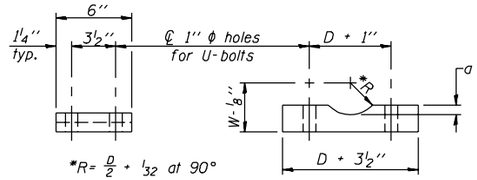


SECTION B-B



** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D



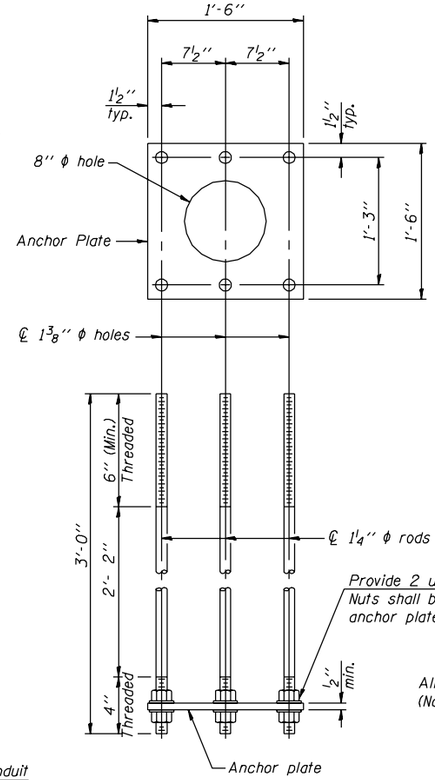
*R = D/2 + 1/32 at 90°

D = Outside Diameter of Chord.
For W. see Base Sheet OS-A-6.

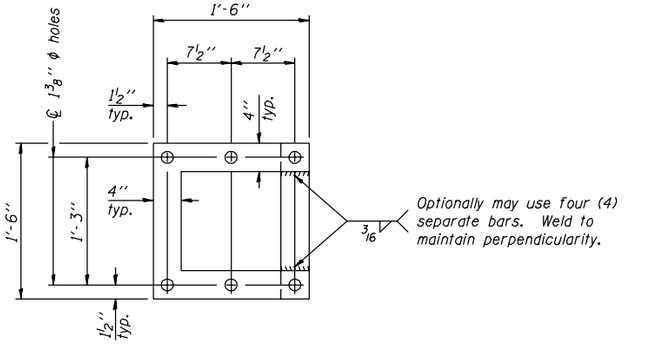
SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

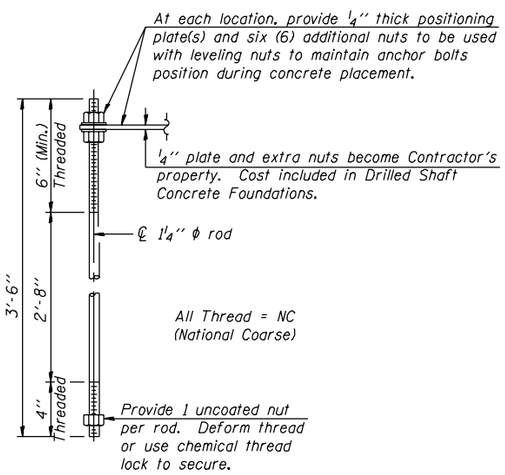
Truss Chord Nominal Dia.	a
5''	3/4''
5 1/2''	13/16''
6''	7/8''
6 1/2''	15/16''
7''	1''



ANCHOR ROD DETAIL
Spread Footing Foundation

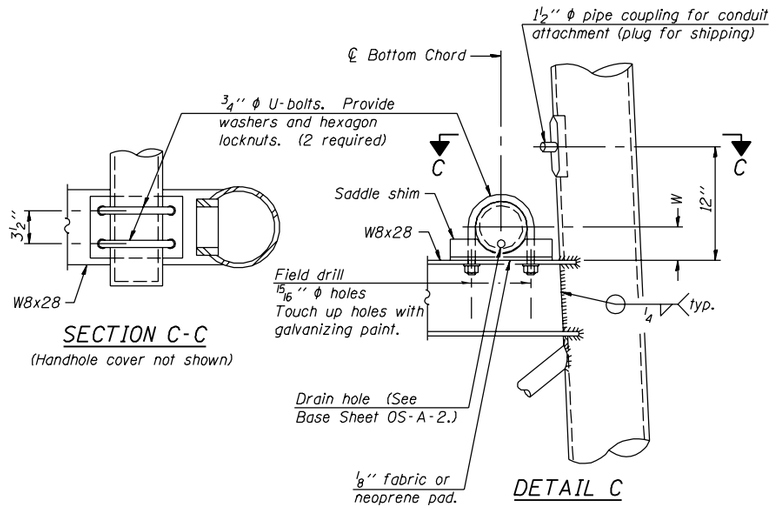


POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation

Anchor rods shall conform to AASHTO M314 Grade 36 or 50 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C
(Handhole cover not shown)

DETAIL C

10'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

OS-A-6A 7/01/2006

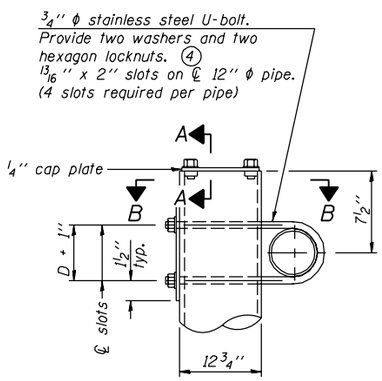
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

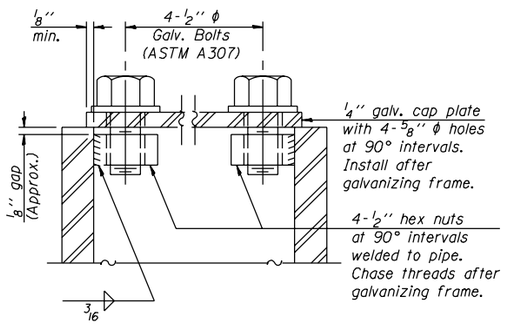
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #

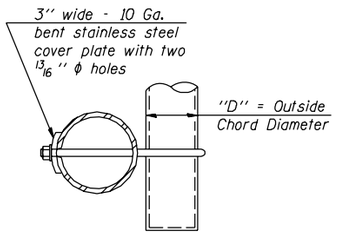


DETAIL A

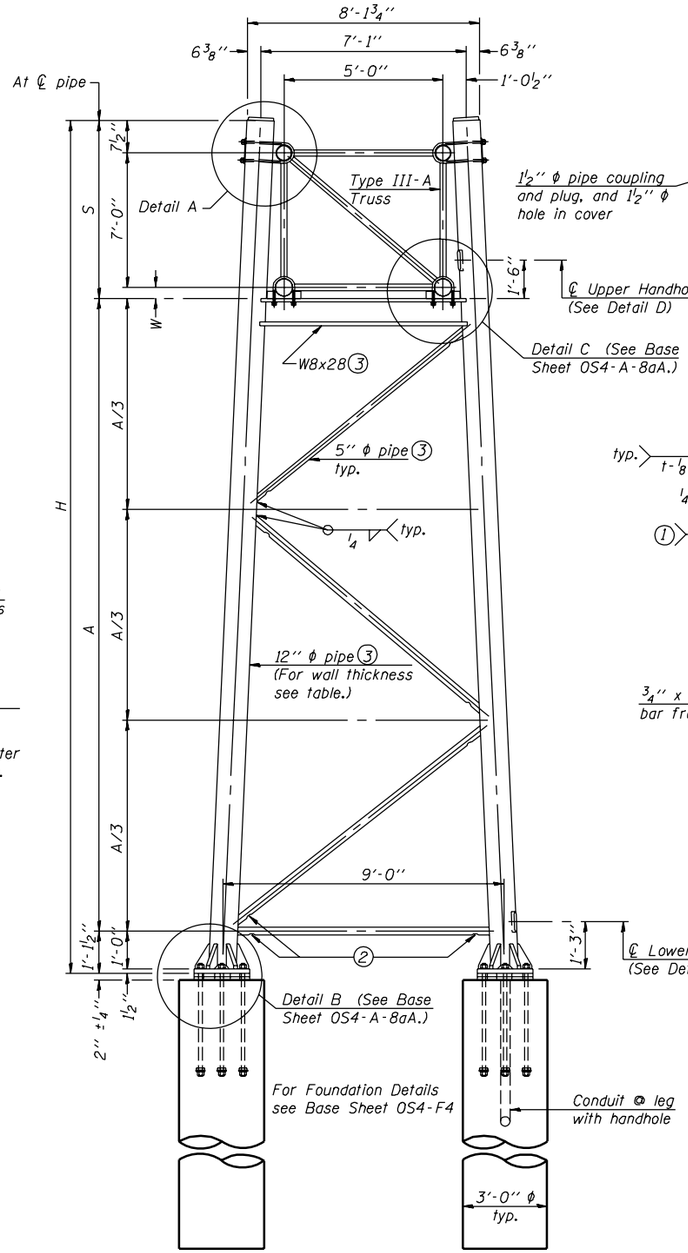


SECTION A-A

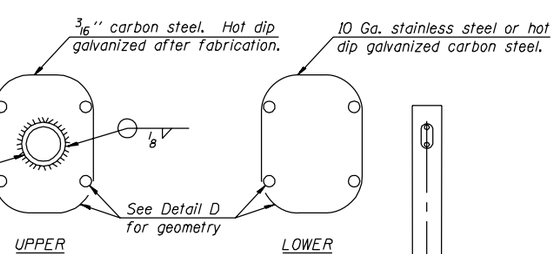
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



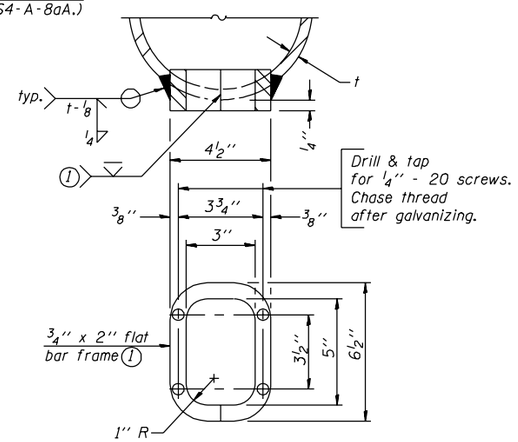
SECTION B-B



SIDE ELEVATION

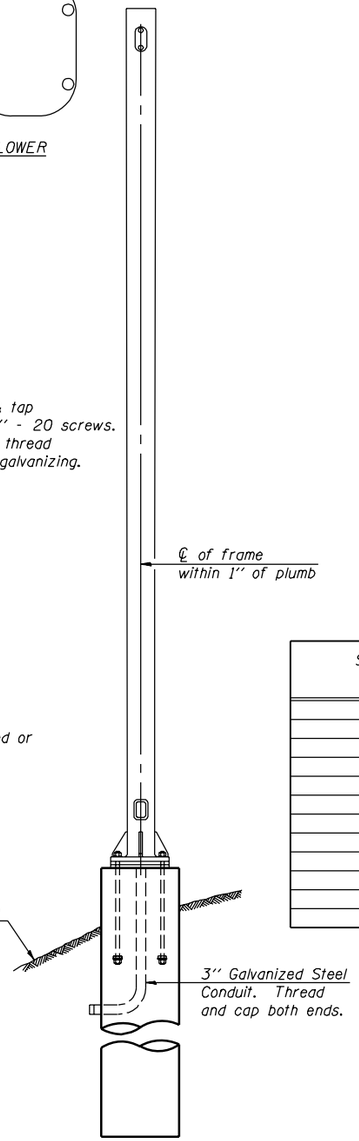


HANDHOLE COVERS



Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip galvanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

Dimensions		
Truss Chord Nominal Dia.	W	S
7''	4 3/4''	8'-0 1/4''
8 1/2''	5 1/2''	8'-1''
9''	5 3/4''	8'-1 1/4''

TRUSS SUPPORT DETAILS
(12'' ϕ Pipe-Type III-A Truss

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS4-A-8a 7/01/2006

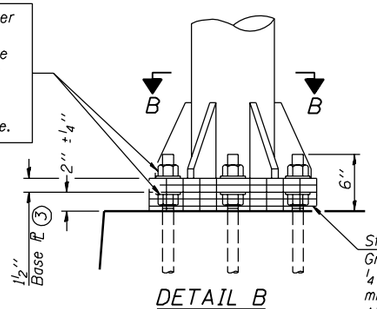
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-A ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS
Contract #

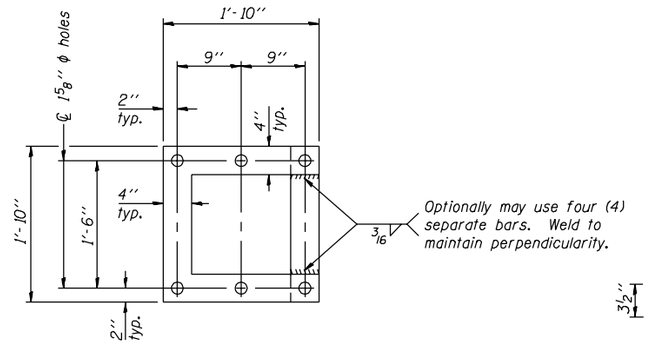
Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



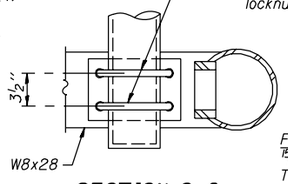
DETAIL B

Ribs shall be cut to fit slope of pipe.

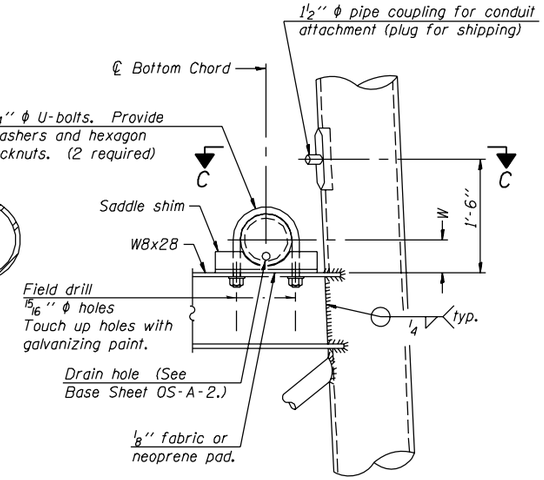
Stainless Steel Standard Grade Wire Cloth. 3'' wide. 1/4'' maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2'' lap. Secure to base plate after erection with 3/4'' stainless steel banding.



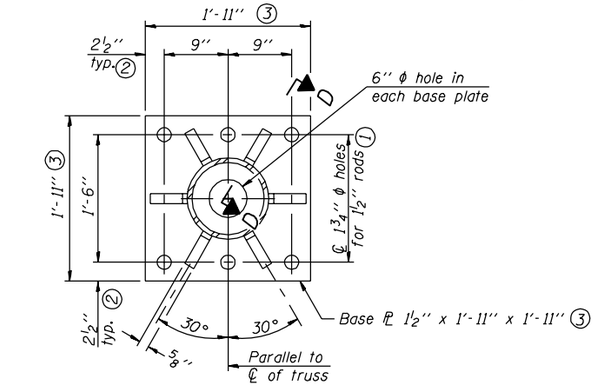
POSITIONING PLATE(S)



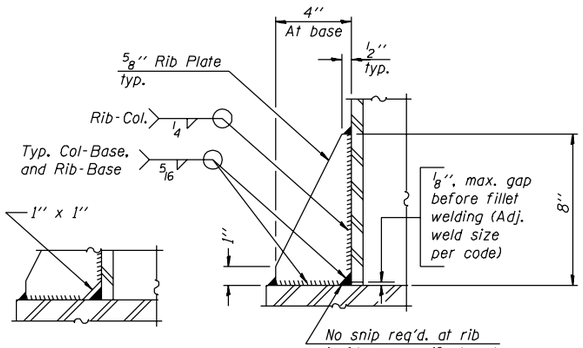
SECTION C-C
(Handhole cover not shown)



DETAIL C



SECTION B-B

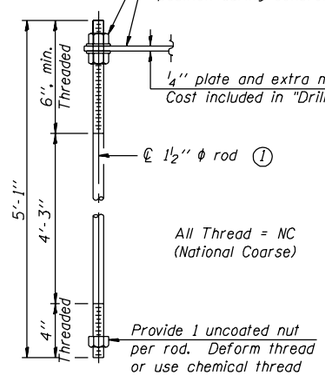


** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4'' from snip.

SECTION D-D

At each location, provide 1/4'' thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.

1/4'' plate and extra nuts become Contractor's property. Cost included in "Drilled Shaft Concrete Foundation".



ANCHOR ROD DETAIL

Anchor rods shall conform to AASHTO M314 Grade 36 or 55 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.

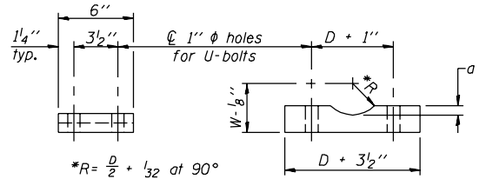
TYPE III-A TRUSS
12'' ϕ PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

① 1 3/4'' ϕ rod. 2'' ϕ holes

② 2 3/4'' edge distance

③ Base ℄ 1 5/8'' x 1'-11 1/2'' x 1'-11 1/2''



*R= D/2 + 1/32 at 90°

D = Outside Diameter of Chord.
For W. see Base Sheet OS-A-6.

Truss Chord Nominal Dia.	a
7''	1''
8 1/2''	1 1/4''
9''	1 3/8''

SADDLE SHIM DETAIL
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS4-A-8aA 7/01/2006

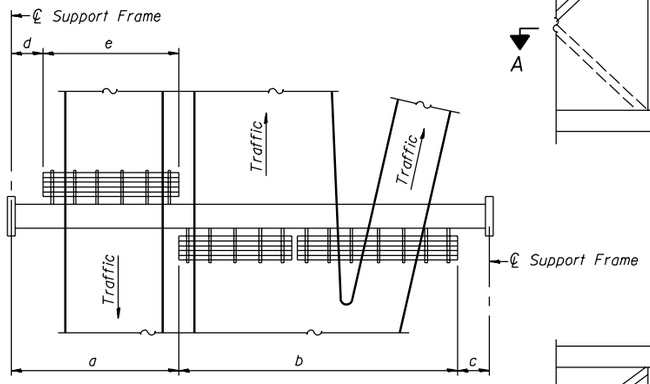
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-A ALUMINUM TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

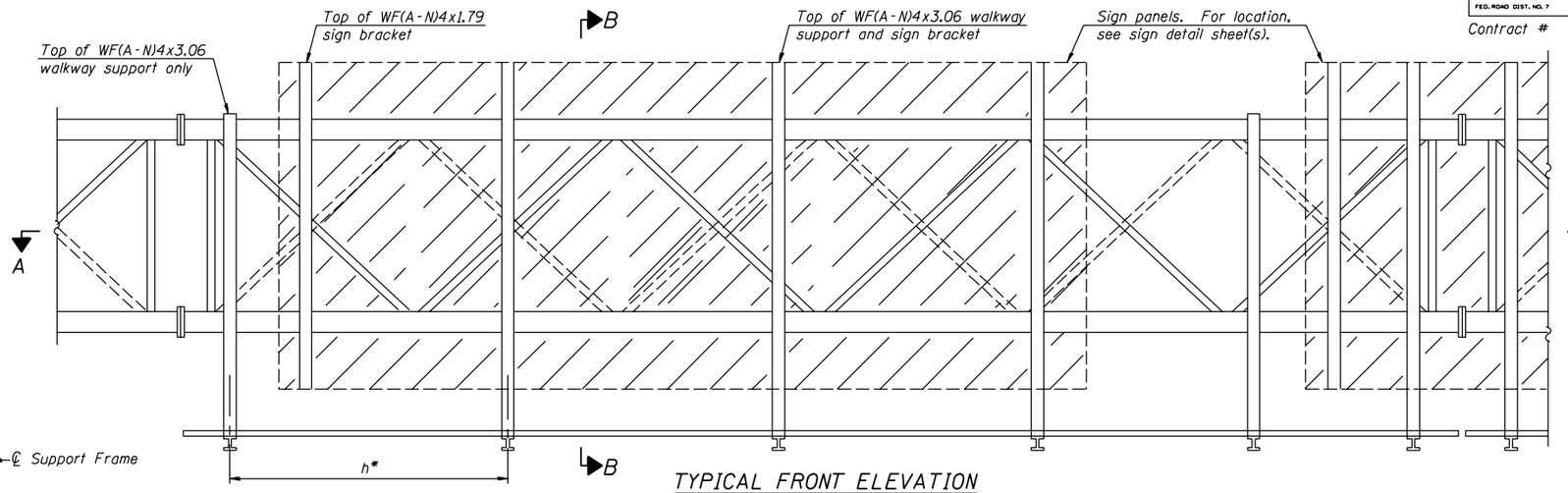
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

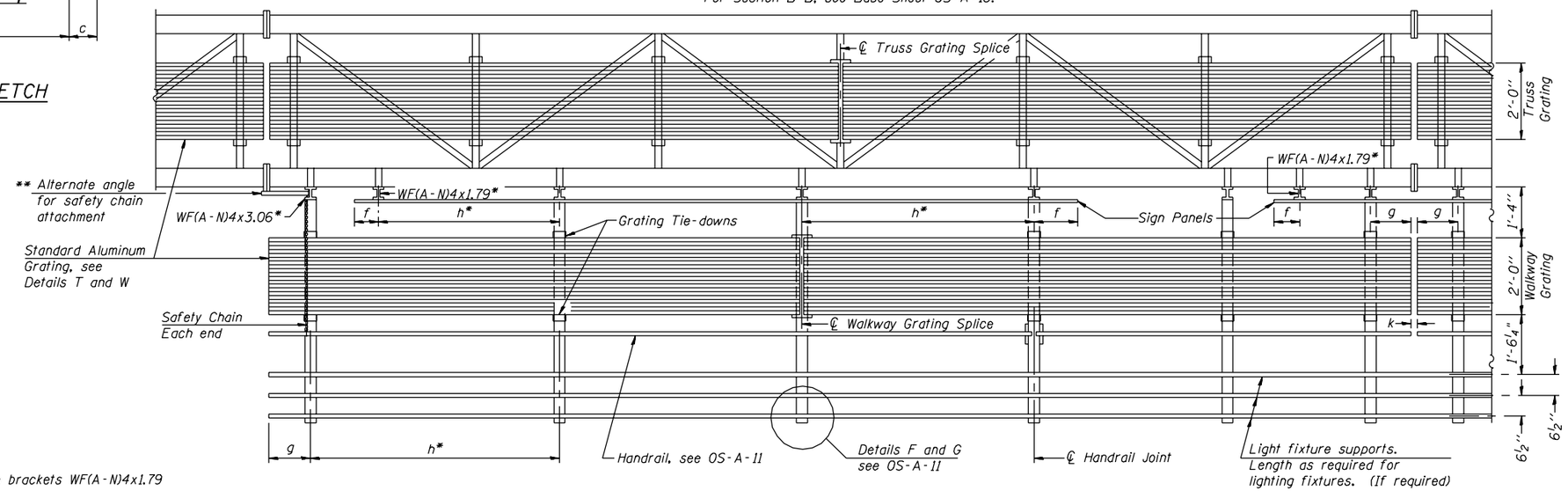
Contract #



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.



Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06
ASTM B308, Alloy 6061-T6

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:

* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For Handrail Details see Base Sheet OS-A-11.

SECTION A-A
Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

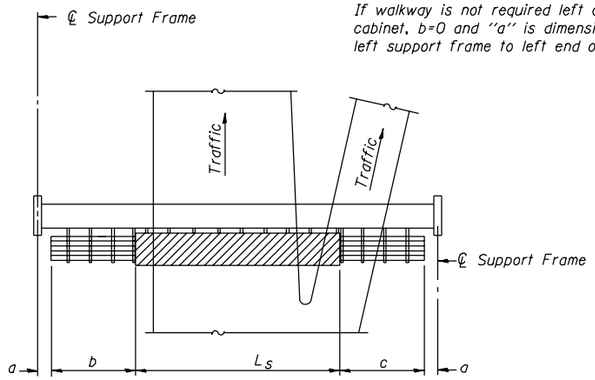
OS-A-9 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

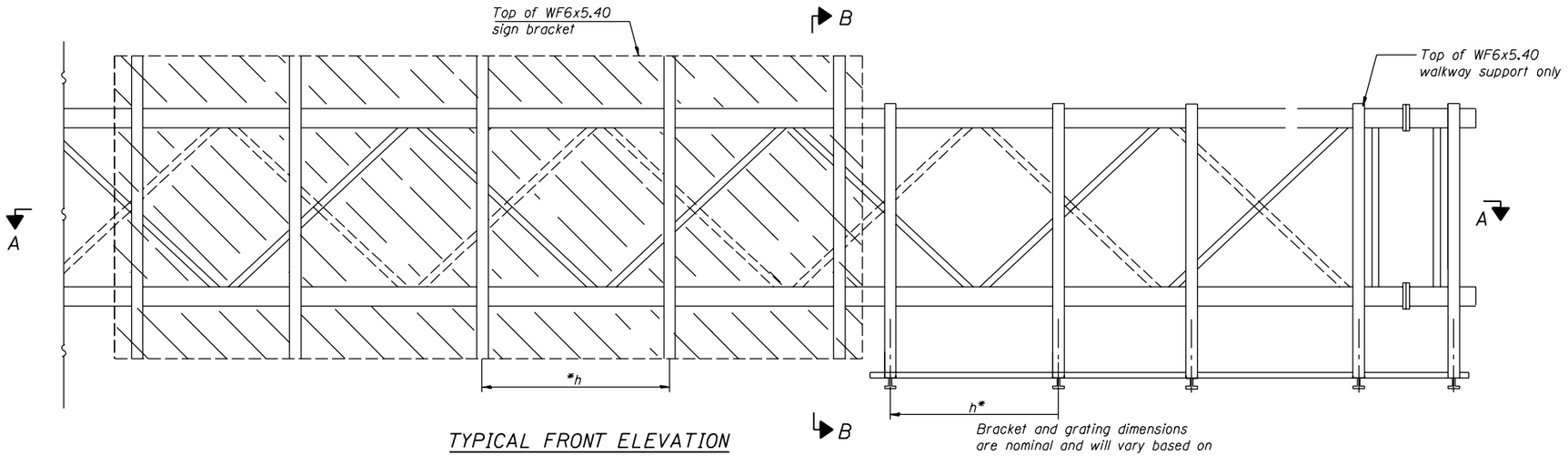
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS
Contract #

(1) If walkway is required left of the DMS cabinet, a=1'-6" and b=walkway lengths. If walkway is not required left of the DMS cabinet, b=0 and "a" is dimension from left support frame to left end of cabinet.



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)

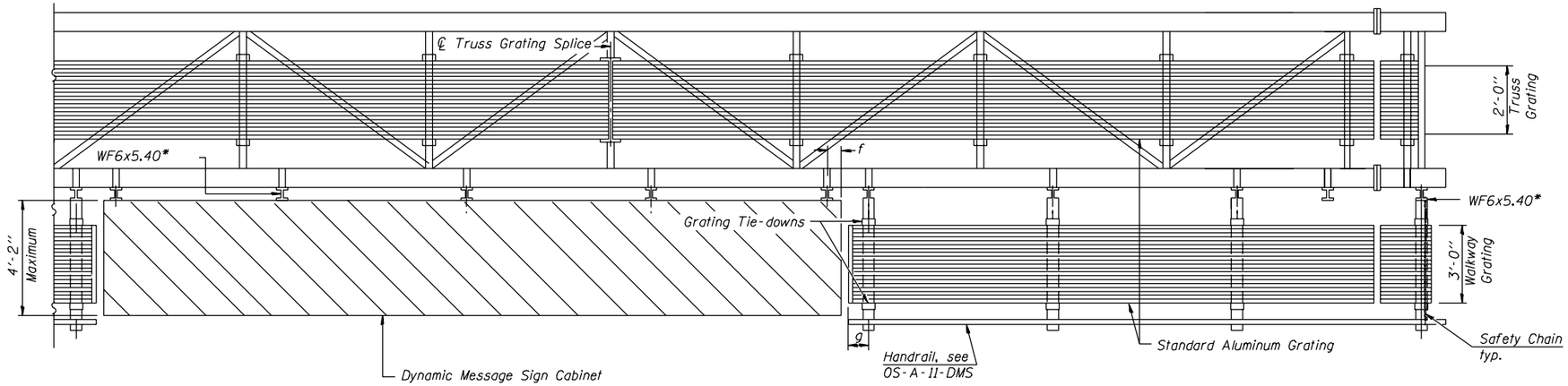


TYPICAL FRONT ELEVATION
With handrail omitted for clarity.

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6



Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

Notes:
* Space walkway brackets WF6x5.40 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, WF6x5.40

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Structure Number	Station	a	b	c	L_s	Walkway Grating and Handrail Lengths

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS
FOR DMS

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

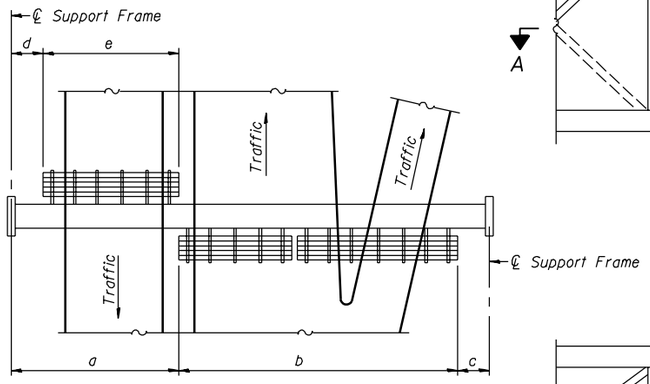
OS-A-9-DMS 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

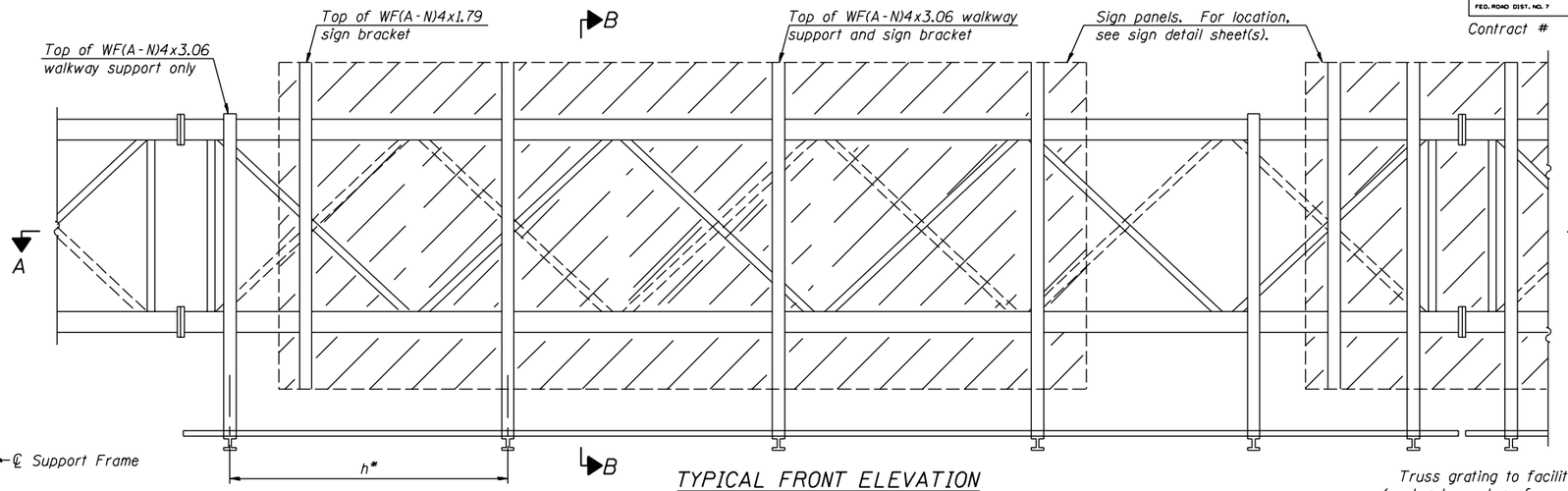
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

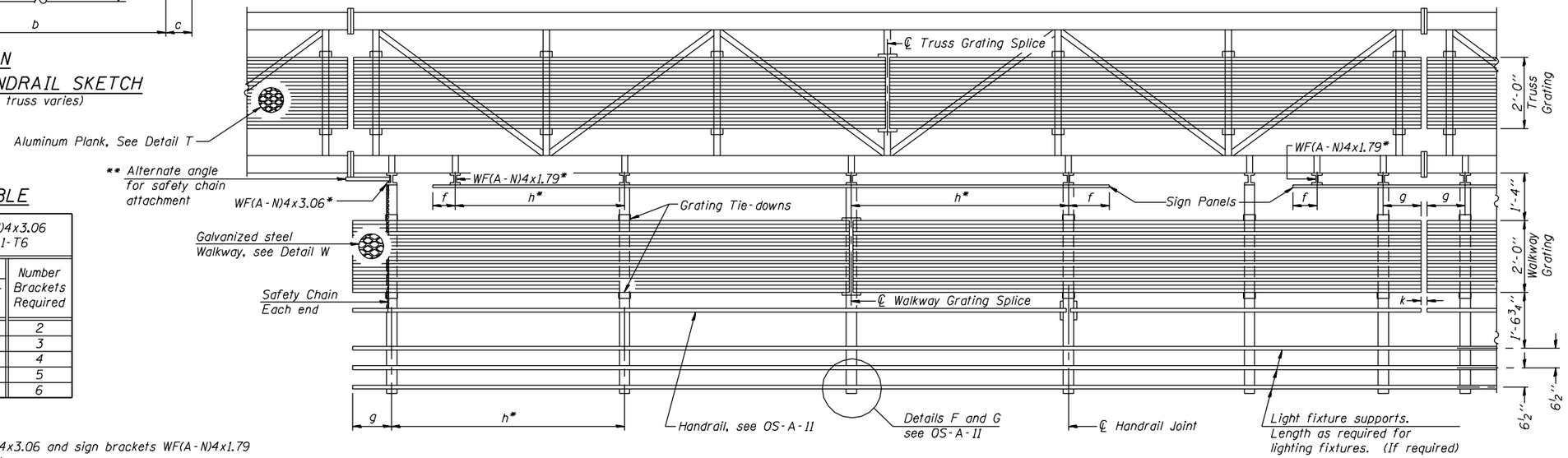


PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-A-10.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12'' on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".



Walkway and Truss Grating width dimensions are nominal and may vary ±1/2'' based on available standard widths.

BRACKET TABLE

WF(A-N)4x1.79 or WF(A-N)4x3.06
ASTM B308, Alloy 6061-T6

Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0''	2
8'-0''	14'-0''	3
14'-0''	20'-0''	4
20'-0''	26'-0''	5
26'-0''	32'-0''	6

SECTION A-A
Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

Notes:
* Space walkway brackets WF(A-N)4x3.06 and sign brackets WF(A-N)4x1.79 for efficiency and within limits shown:

f = 12'' maximum, 4'' minimum (End of sign to ℄ of nearest bracket)
g = 12'' maximum, 4'' minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0'' maximum (℄ to ℄ sign and/or walkway support brackets, WF(A-N)4x1.79 or WF(A-N)4x3.06)
k = 2'' maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-A-11.

For Details T and W, Section B-B and Grating Splice Details see Base Sheet OS-A-10.
For handrail details see base sheet OS-A-11.

Note:
Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-9, and may be substituted by Contractor at no change in contract cost.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

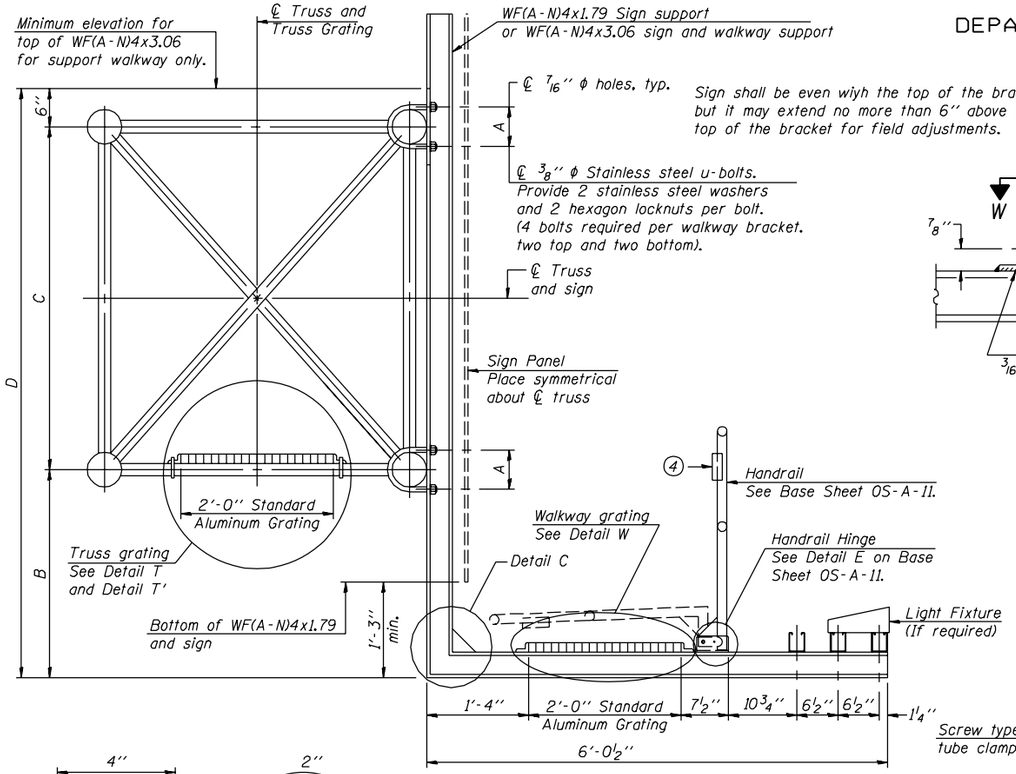
OS-A-9S 7/01/2006

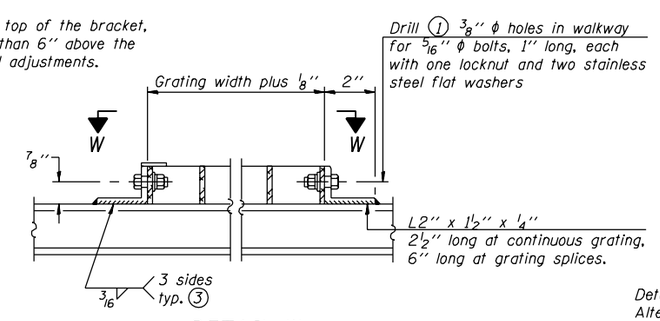
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

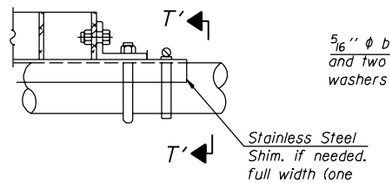
SHEET NO. -
- SHEETS

Contract #

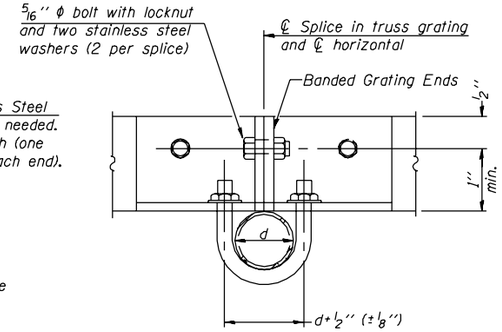




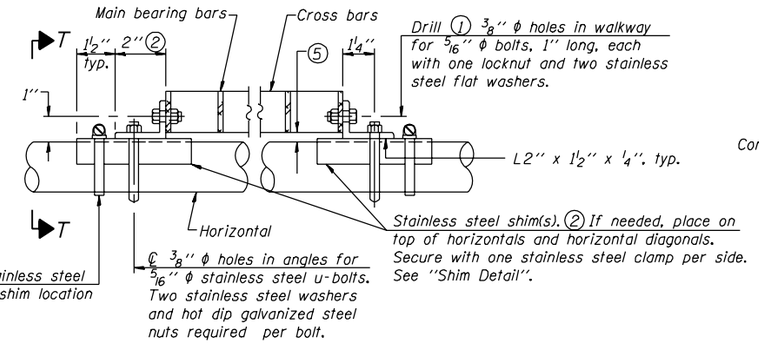
DETAIL W
(Walkway grating)



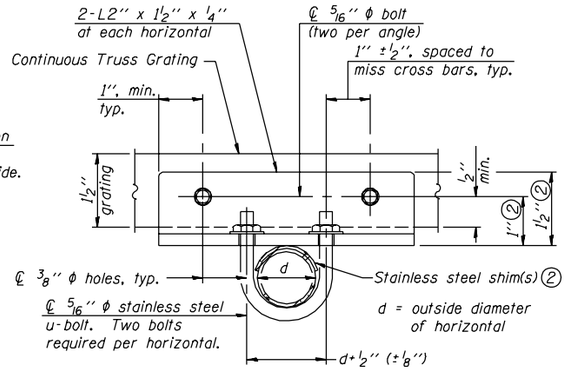
DETAIL T'
(Truss grating splice)
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



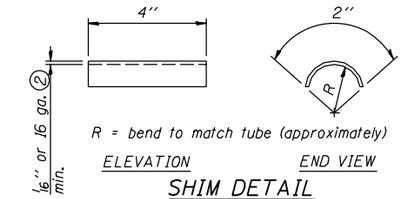
SECTION T'-T'



DETAIL T
(Continuous Truss grating)

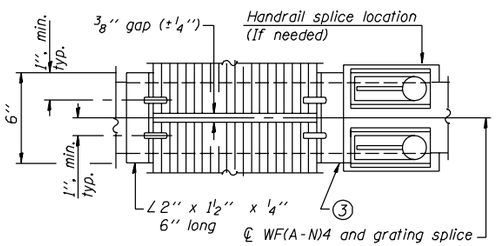


SECTION T-T

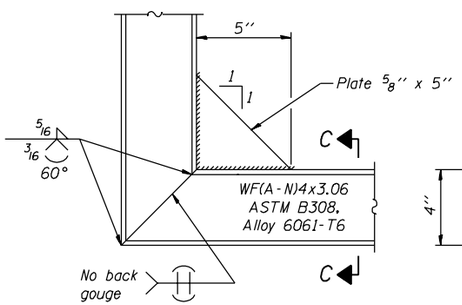


SHIM DETAIL

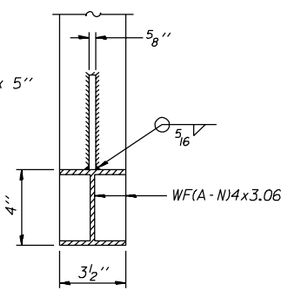
SECTION B-B



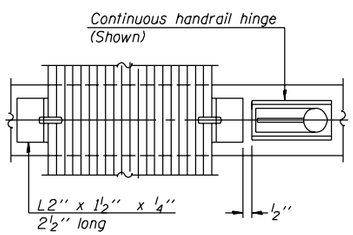
(AT WALKWAY GRATING SPLICE)



DETAIL C



SECTION C-C



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B221 Alloy 6061-T6.

Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.^{3} per bar, a depth of 1 1/2", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	B	C	D

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
2. Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
3. If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
4. PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
5. Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.

NUMBER	REVISION	DATE

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-A-10 7/01/2006

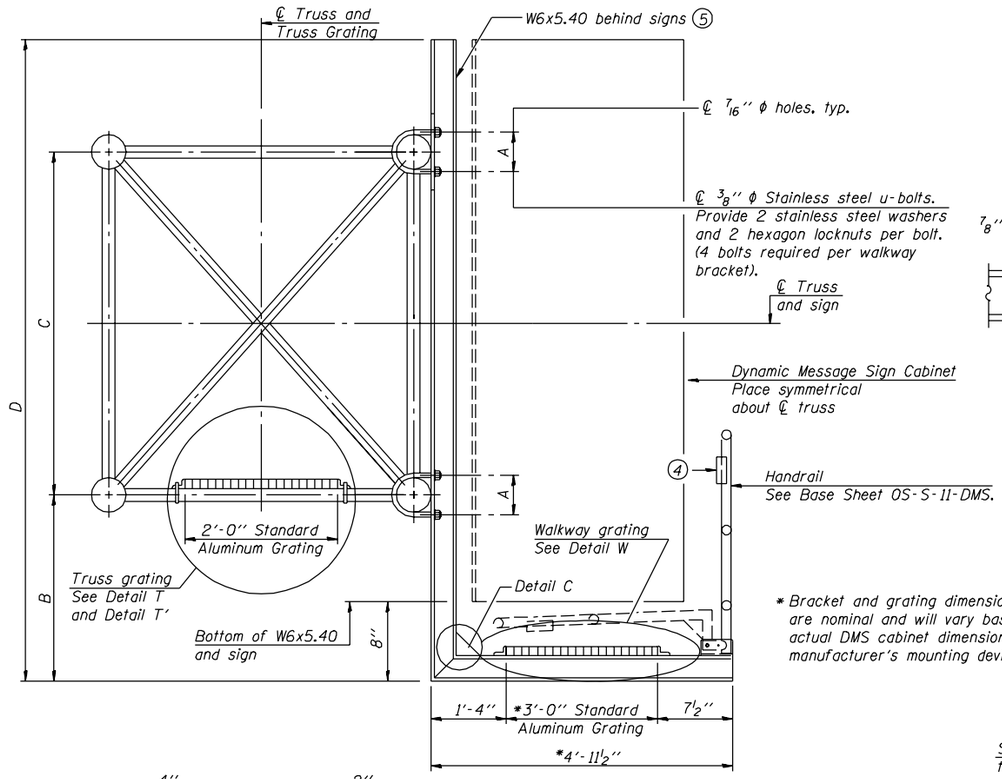
OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

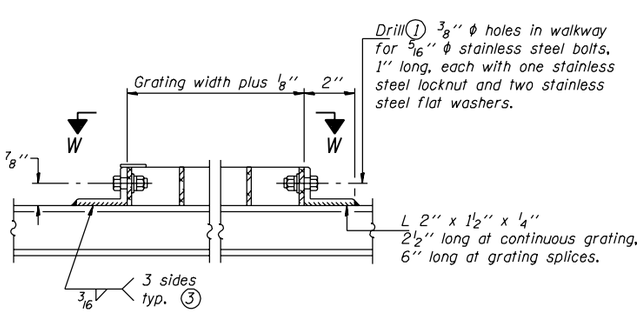
Contract #



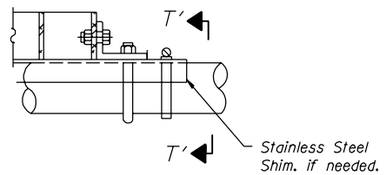
* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

SECTION B-B

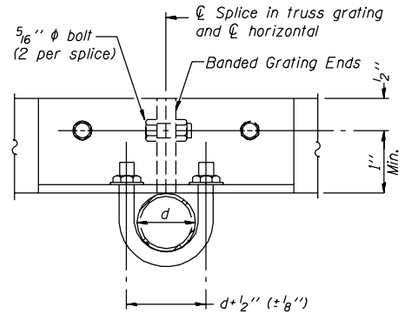
SHIM DETAIL



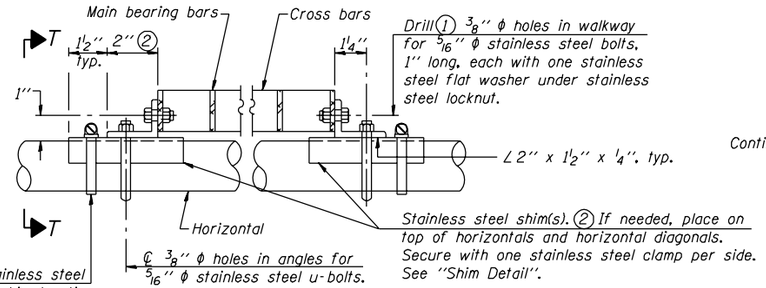
DETAIL W
(Walkway grating)



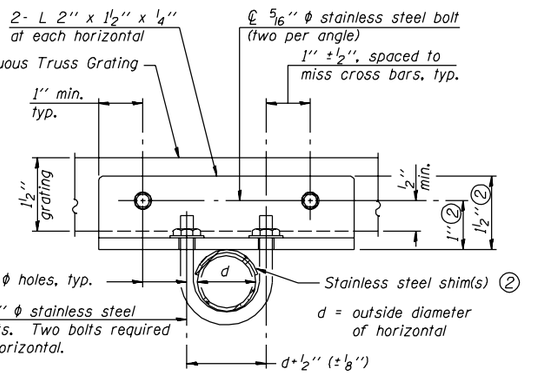
DETAIL T'
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



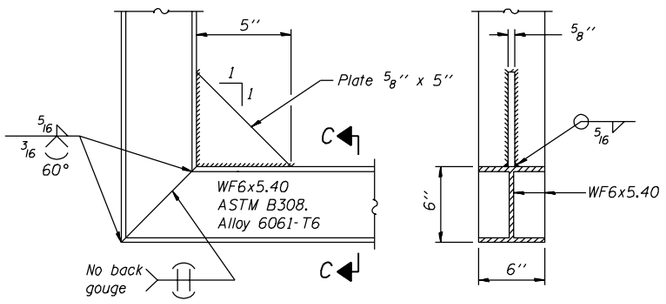
SECTION T'-T'



DETAIL T
(Continuous Truss grating)

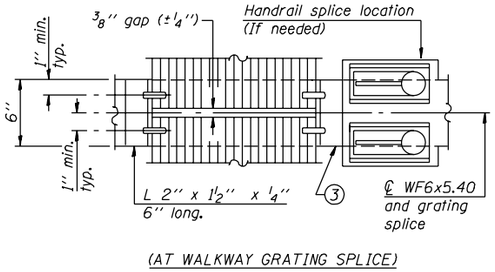


SECTION T-T

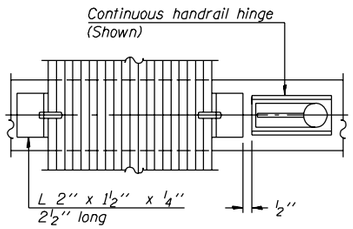


DETAIL C

SECTION C-C



(AT WALKWAY GRATING SPLICE)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.

Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "I" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in. per bar. a depth of 1 1/2", spaced on 1 3/16" centers.

Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
(2) Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
(3) If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
(4) If 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
(5) Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.

Structure Number	Station	A	B	C	D

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

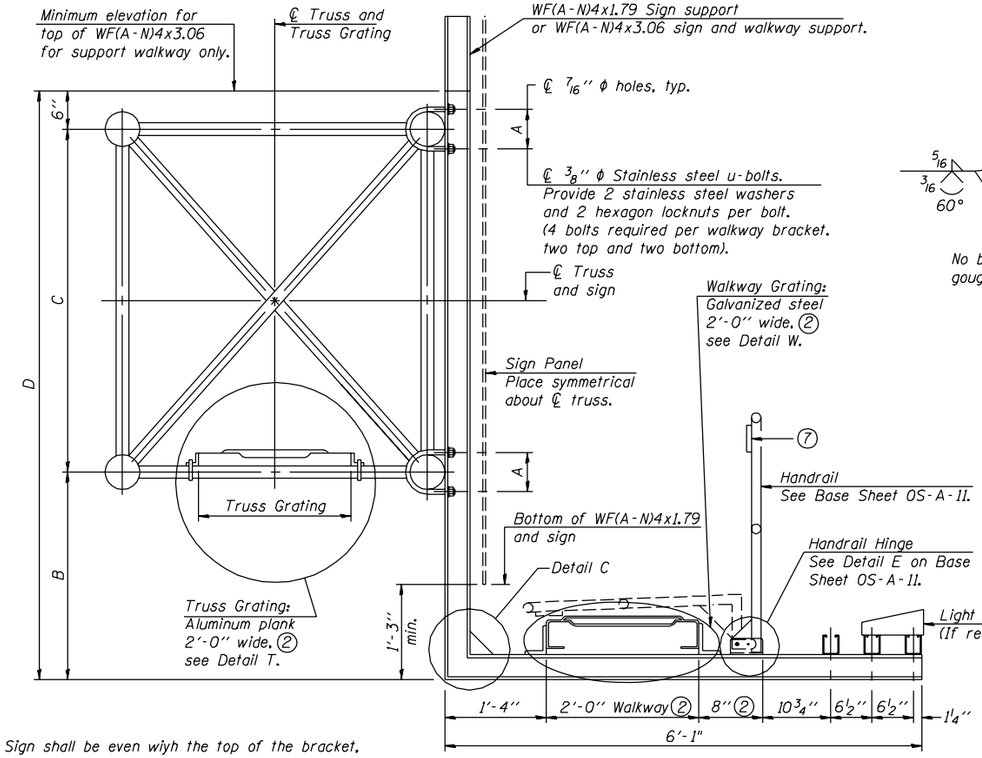
OS-A-10-DMS 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

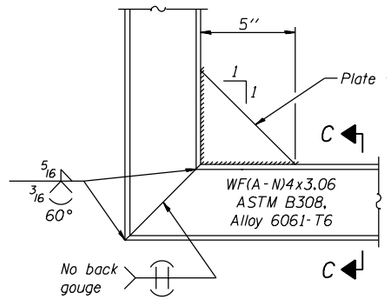
SHEET NO. - - SHEETS

Contract #

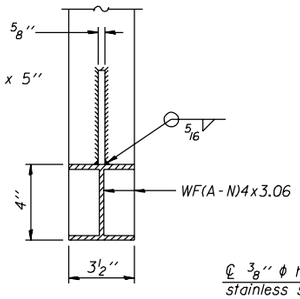


Sign shall be even wiyh the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.

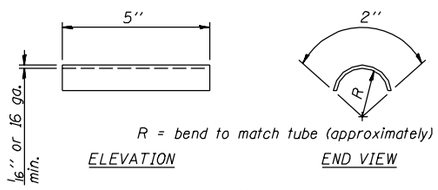
SECTION B-B



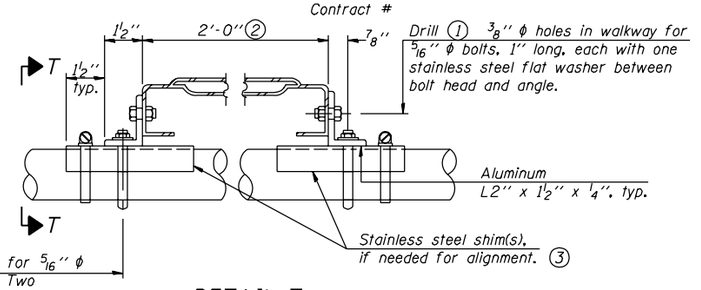
DETAIL C



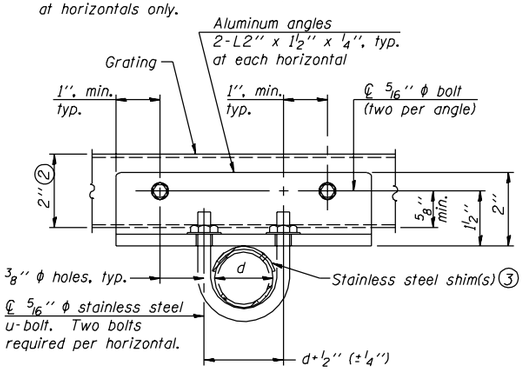
SECTION C-C



SHIM DETAIL

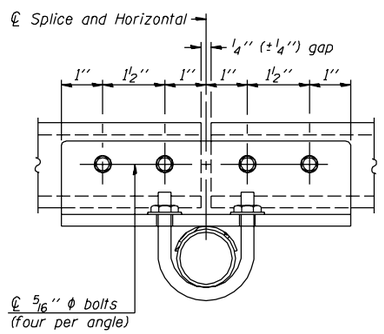


DETAIL T
(Truss grating at horizontal)



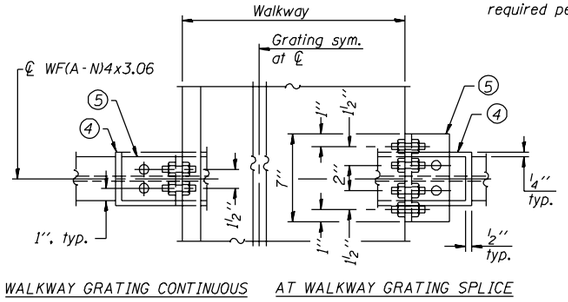
SECTION T-T
(Truss Grating Continuous)

d = outside diameter of horizontal



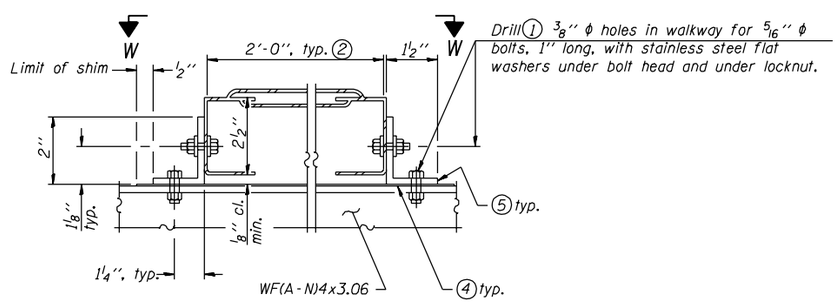
SECTION T-T
(Truss Grating Splice)

Alternate splice details and locations may be used subject to the Engineer's review and approval.



WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

SECTION W-W



DETAIL W
GALVANIZED STEEL WALKWAY GRATING

ALUMINUM TRUSS GRATING

Structure Number	Station	A	B	C	D

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(3) Stainless steel shims shall be placed under angles at horizontals and horizontal diagonals if needed to compensate for alignment variations and differences in horizontal diagonal pipe sizes beyond adjustment provided by angles. Secure with one stainless steel clamp per location, see "Shim Detail". Thicker shim plates may be used when needed subject to shims performing properly.

(4) 1/16" (or 16 ga.) x 2 1/2" x 4" stainless steel shim adhered to top of WF(A-N)4x3.06 beneath each galvanized angle. Adhesives for shims shall be suitable for materials joined and full exposure conditions.

(5) Galvanized steel L2" x 2" x 1/4", 3 1/2" long with continuous grating, 7" long at grating splice.

(6) Details shown are considered equal alternatives to the Aluminum Walkway on Base Sheet OS-A-10 and may be substituted by Contractor at no change in contract cost.

(7) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

OVERHEAD SIGN STRUCTURES
ALTERNATE WALKWAY DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

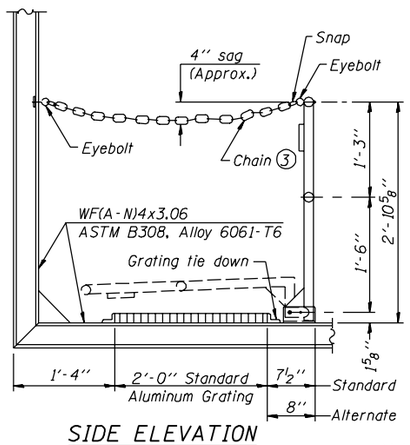
OS-A-10S 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

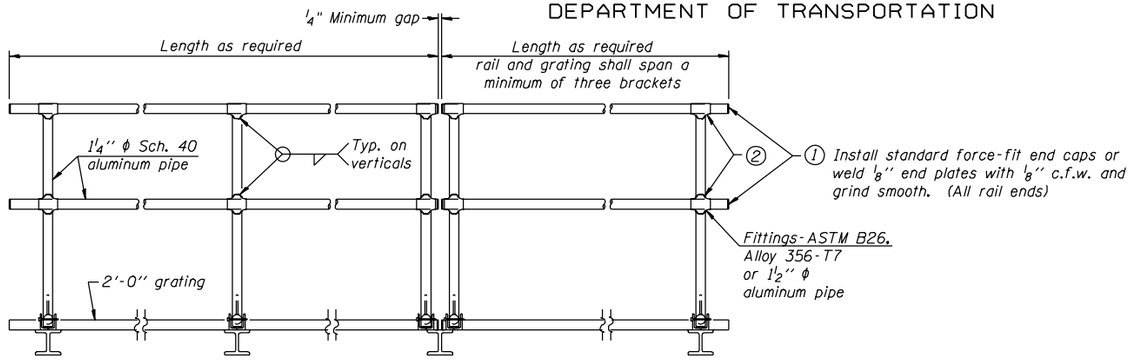
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #



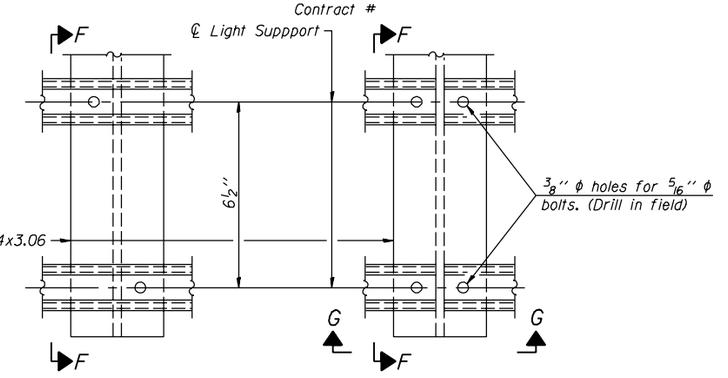
SIDE ELEVATION
(Showing safety chain w/o sign)



FRONT ELEVATION

(1) Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

(2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16" ϕ hole in fitting for 3/8" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 7/16"ϕ holes on top rail at ends only.)

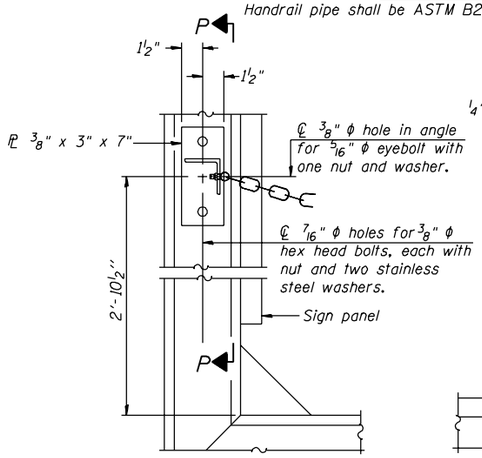


DETAIL F

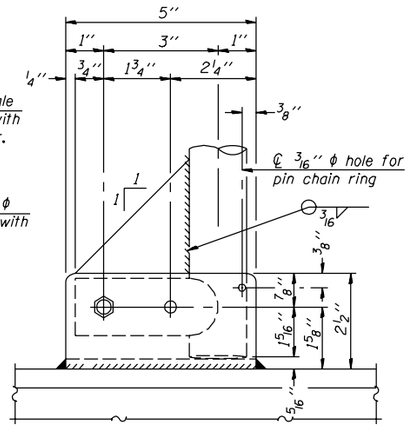
DETAIL G

HANDRAIL DETAILS

Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

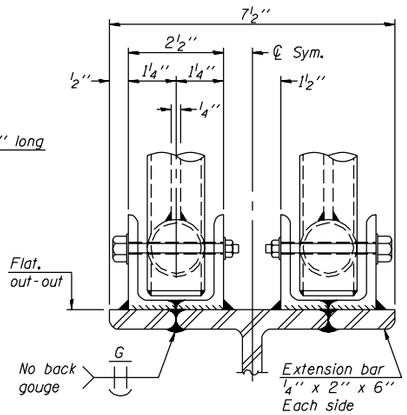


ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



SIDE ELEVATION

FRONT ELEVATION
See "Elevation" at right for dimensions.



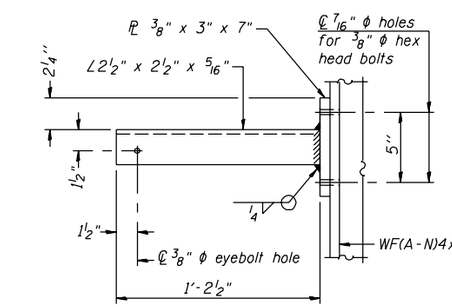
ELEVATION AT HANDRAIL JOINT (4)

SECTION F-F

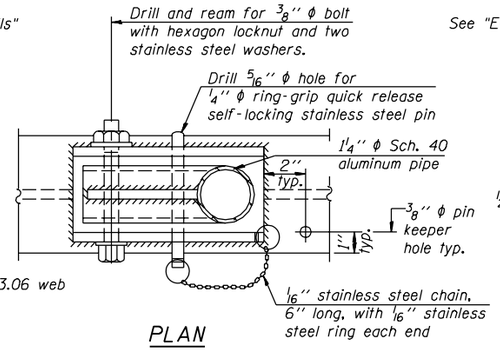
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

(5) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

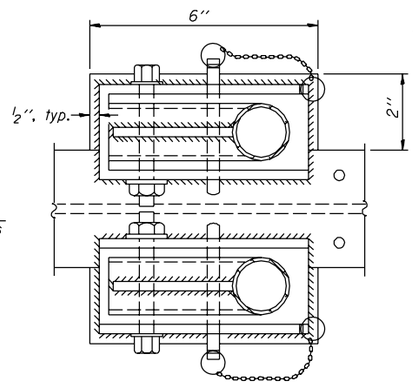


SECTION P-P

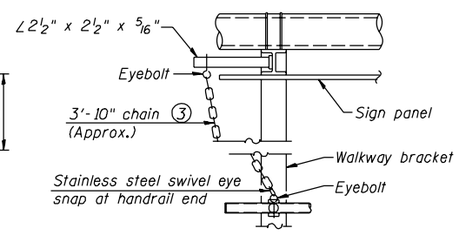


PLAN

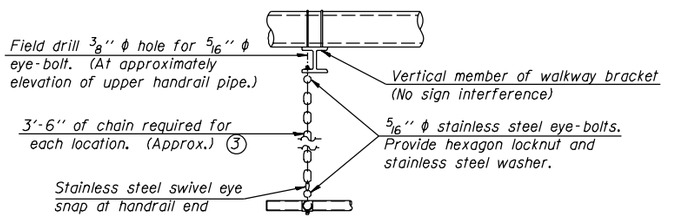
DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

(3) 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

(4) Extrusions may be used in lieu of the details shown, with approval of the Engineer.

OVERHEAD SIGN STRUCTURES
ALUMINUM HANDRAIL DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

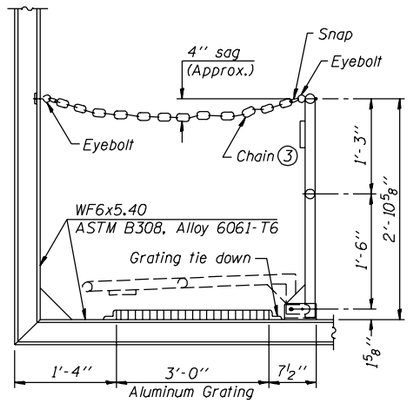
OS-A-11 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

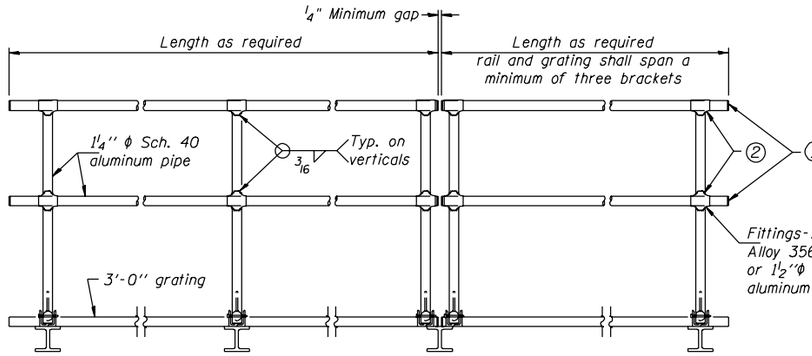
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #



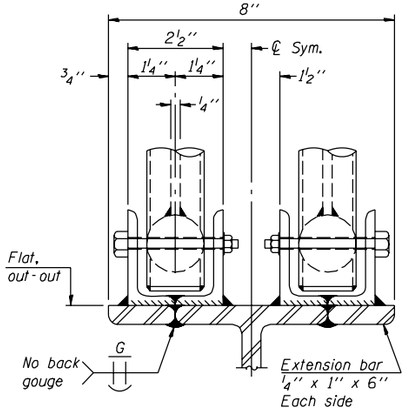
SIDE ELEVATION
(Showing safety chain w/o sign)



(2) Horizontal handrail member shall be continuous thru fitting. Provide 7/16" ϕ hole in fitting for 3/8" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" ϕ holes on top rail at ends only.)

(1) Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

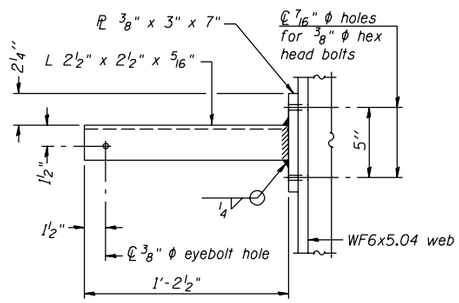
FRONT ELEVATION



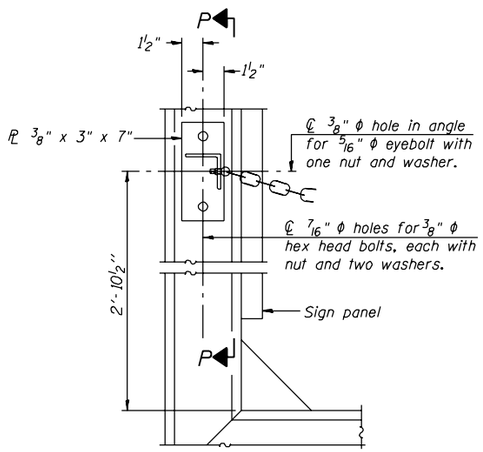
ELEVATION AT HANDRAIL JOINT (4)

HANDRAIL DETAILS

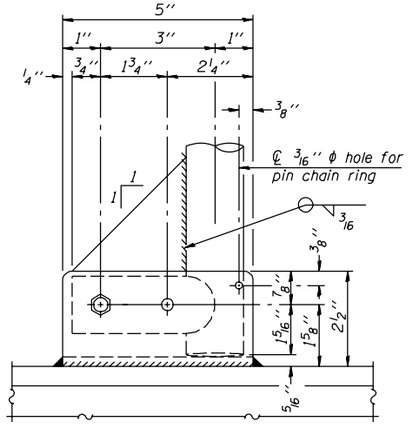
Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.



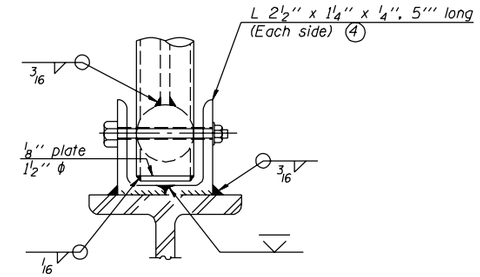
SECTION P-P



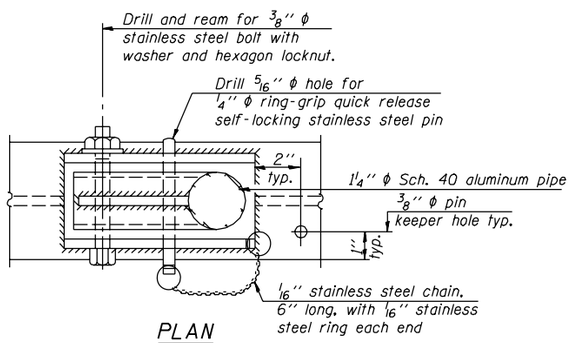
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



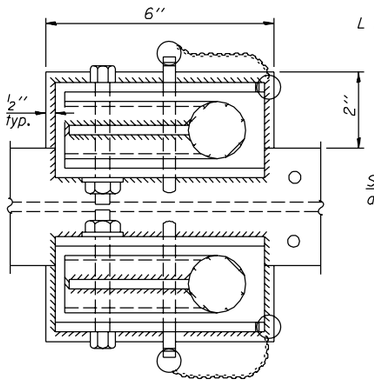
SIDE ELEVATION



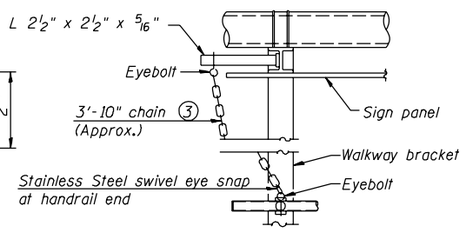
FRONT ELEVATION
See "ELEVATION" at right for dimensions.



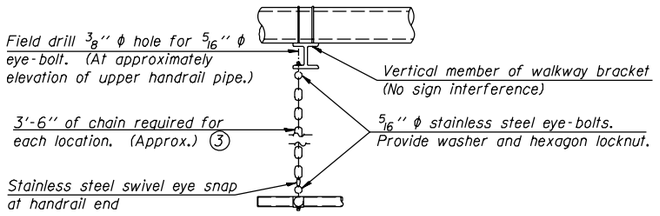
PLAN
DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

(3) 3/16" type 304L stainless steel chain, approximately 12 links per foot.

(4) Extrusions may be used in lieu of the details shown, with approval of the Engineer.

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM HANDRAIL DETAILS
FOR DMS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-A-11-DMS 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

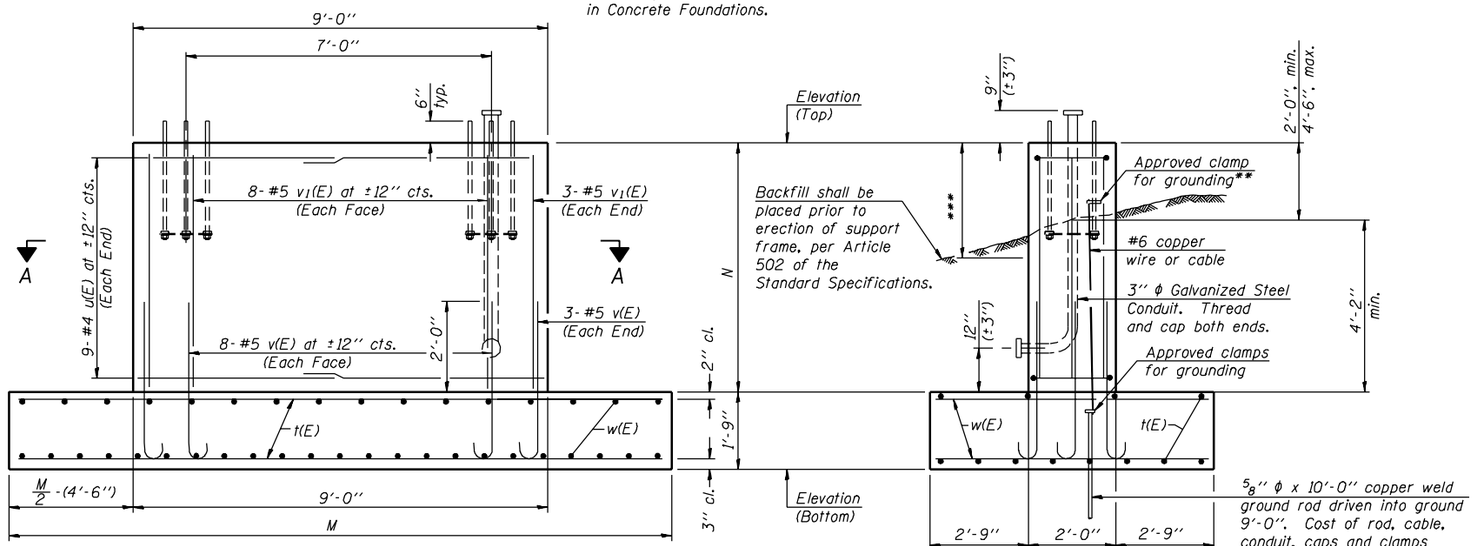
SHEET NO. -
- SHEETS

Contract #

For anchor rod size and placement, see Support Frame Detail Sheet.

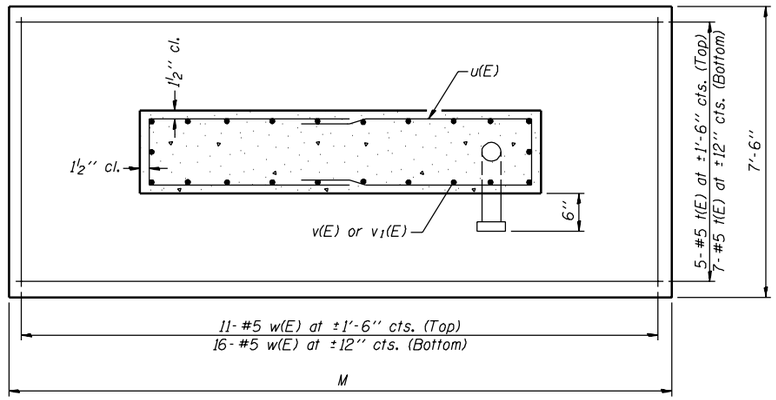
*** Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.*

**** A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Concrete Foundations.*

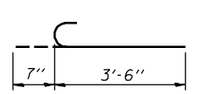


SIDE ELEVATION

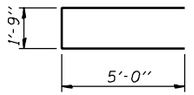
END ELEVATION



SECTION A-A



BAR v(E)



BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	12	#5	*	——
u(E)	18	#4	11'-9"	⊏⊐
v(E)	22	#5	4'-1"	⊏⊐
v1(E)	22	#5	*	——
w(E)	27	#5	7'-3"	——

*Length of t(E) bar = (Dim. M) - 6"
v1(E) bar = (Dim. N) - 3"

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M	

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
During construction, if footing length or width or wall height change by more than 12", or if reinforcement is changed, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 6" ϕ SUPPORT FRAME

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-F1

7/01/2006

For anchor rod size and placement, see Support Frame Detail Sheet.

** *Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.*

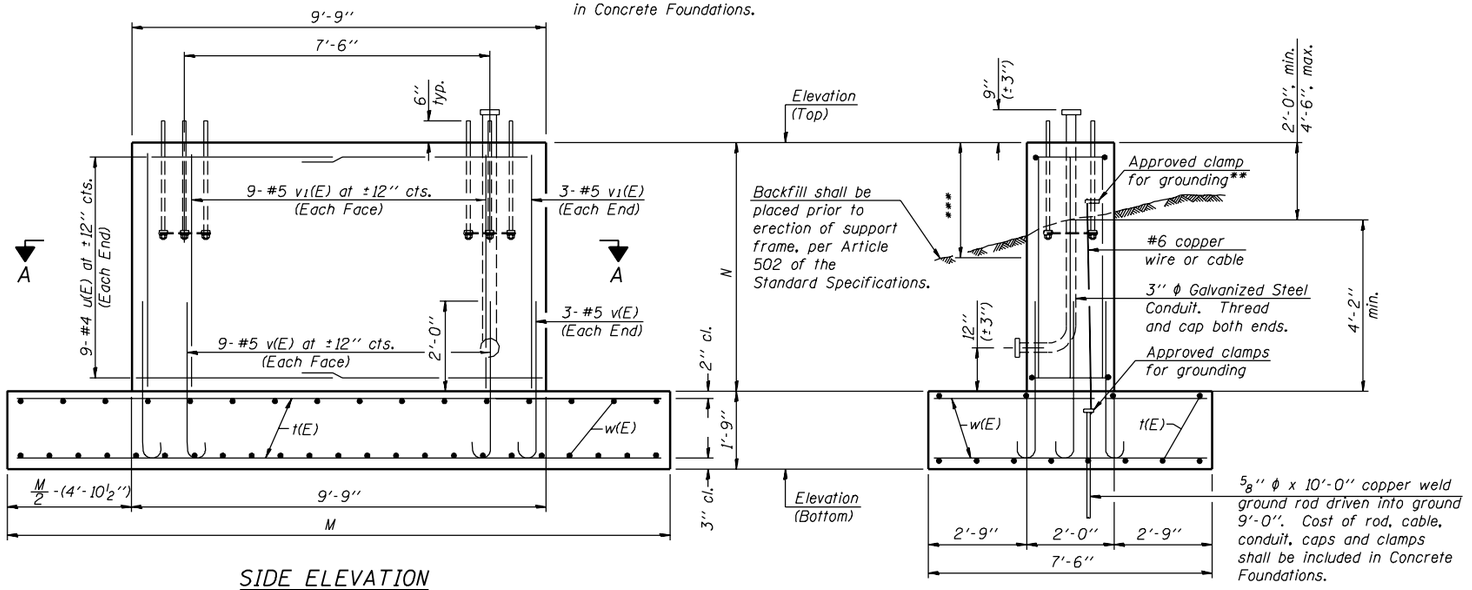
*** *A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Concrete Foundations.*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

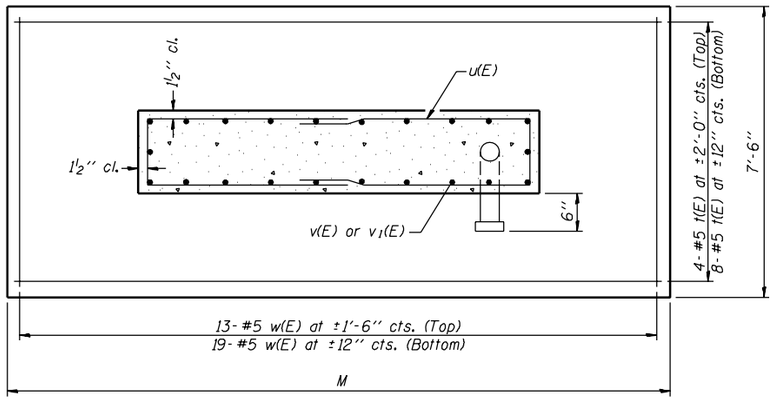
SHEET NO. -
- SHEETS

Contract #

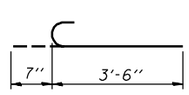


SIDE ELEVATION

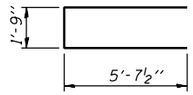
END ELEVATION



SECTION A-A



BAR v(E)



BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	12	#5	*	——
u(E)	18	#4	13'-0''	□
v(E)	24	#5	4'-1''	⊂
v1(E)	24	#5	*	——
w(E)	32	#5	7'-3''	——

*Length of t(E) bar = (Dim. M) - 6''
v1(E) bar = (Dim. N) - 3''

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M	

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
During construction, if footing length or width or wall height change by more than 12'', or if reinforcement is changed, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 8'' ϕ SUPPORT FRAME

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-F2

7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

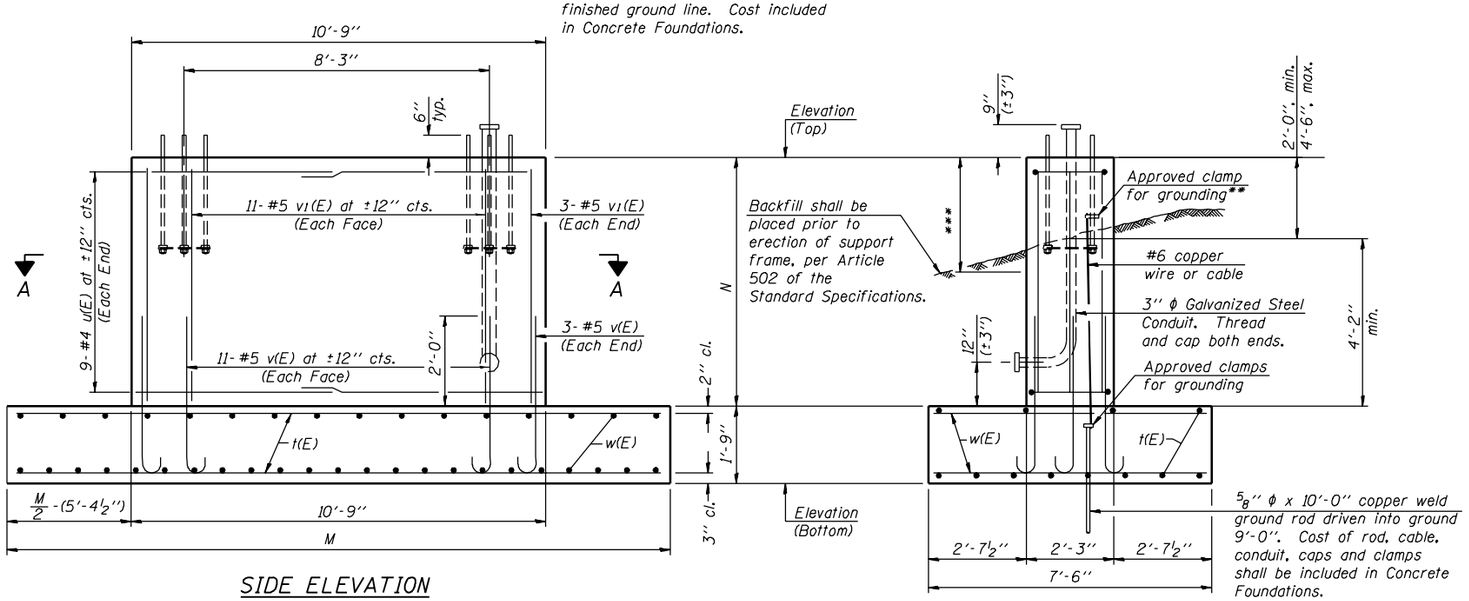
SHEET NO. -
- SHEETS

Contract #

For anchor rod size and placement, see Support Frame Detail Sheet.

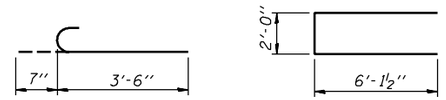
*** Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.*

**** A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Concrete Foundations.*



SIDE ELEVATION

END ELEVATION



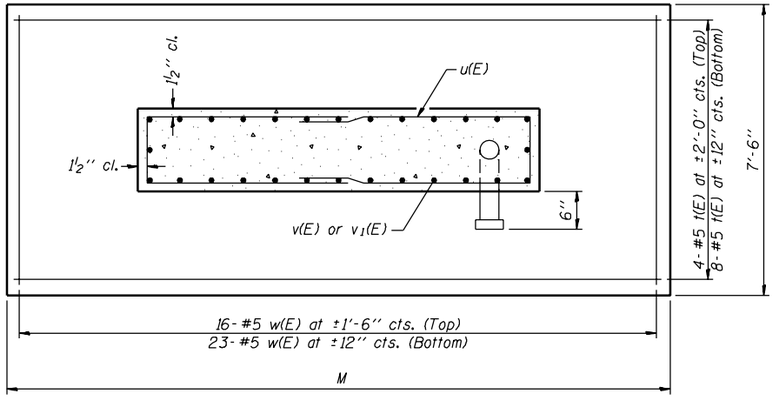
BAR v(E)

BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	12	#5	*	———
u(E)	18	#4	14'-3''	⌊——⌋
v(E)	28	#5	4'-1''	⊂——
v1(E)	28	#5	*	———
w(E)	39	#5	7'-3''	———

*Length of t(E) bar = (Dim. M) - 6''
v1(E) bar = (Dim. N) - 3''



SECTION A-A

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M	

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
During construction, if footing length or width or wall height change by more than 12'', or if reinforcement is changed, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 10'' ϕ SUPPORT FRAME

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-F3

7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

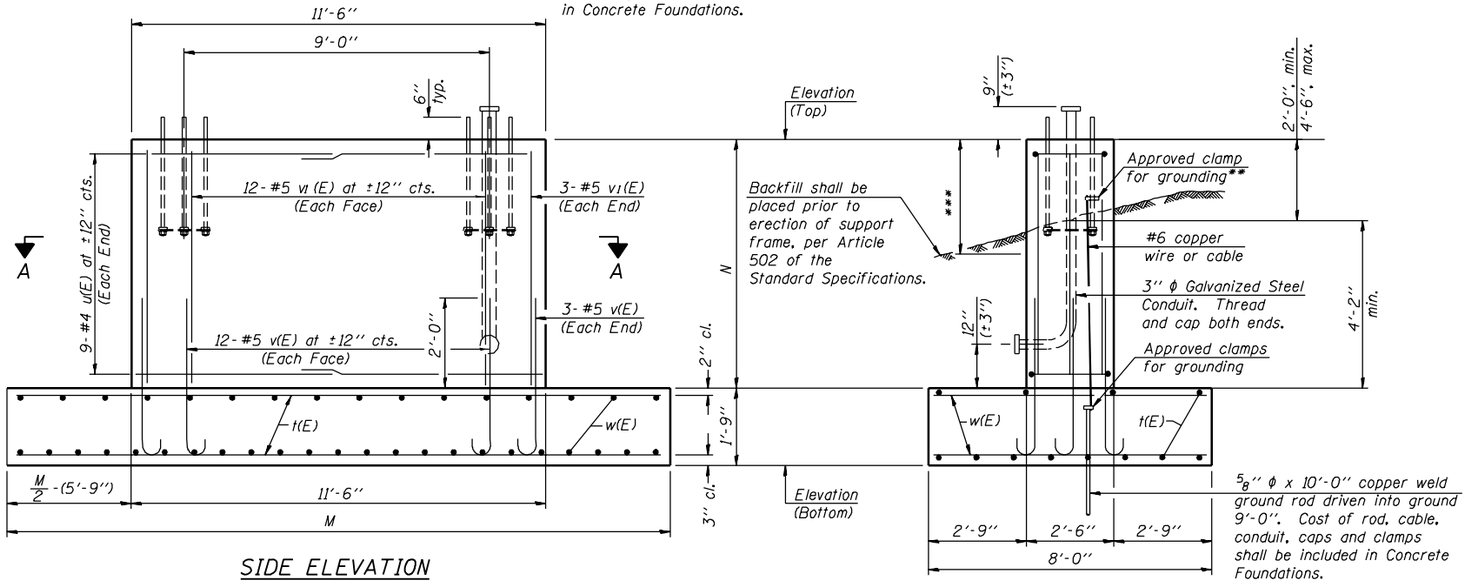
SHEET NO. -
- SHEETS

Contract #

For anchor rod size and placement, see Support Frame Detail Sheet.

** *Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.*

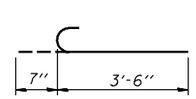
*** *A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Concrete Foundations.*



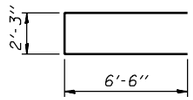
SIDE ELEVATION

END ELEVATION

$\frac{5}{8}$'' ϕ x 10'-0'' copper weld ground rod driven into ground 9'-0''. Cost of rod, cable, conduit, caps and clamps shall be included in Concrete Foundations.



BAR v(E)

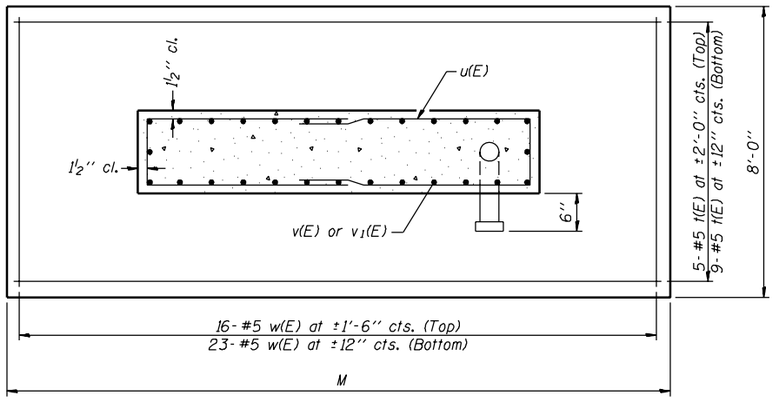


BAR u(E)

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
t(E)	14	#5	*	———
u(E)	18	#4	15'-3''	⌊——⌋
v(E)	30	#5	4'-1''	⊂——
v_1(E)	30	#5	*	———
w(E)	39	#5	7'-9''	———

*Length of t(E) bar = (Dim. M) - 6''
v_1(E) bar = (Dim. N) - 3''



SECTION A-A

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	N	M	Elevation Top	Elevation Bottom	N	M	

Note:
The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.0 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
During construction, if footing length or width or wall height change by more than 12'', or if reinforcement is changed, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

DETAILS FOR 12'' ϕ SUPPORT FRAME

OVERHEAD SIGN STRUCTURES
SPREAD FOOTING DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-F4

7/01/2006

For anchor rod size and placement, see Support Frame Detail Sheet.

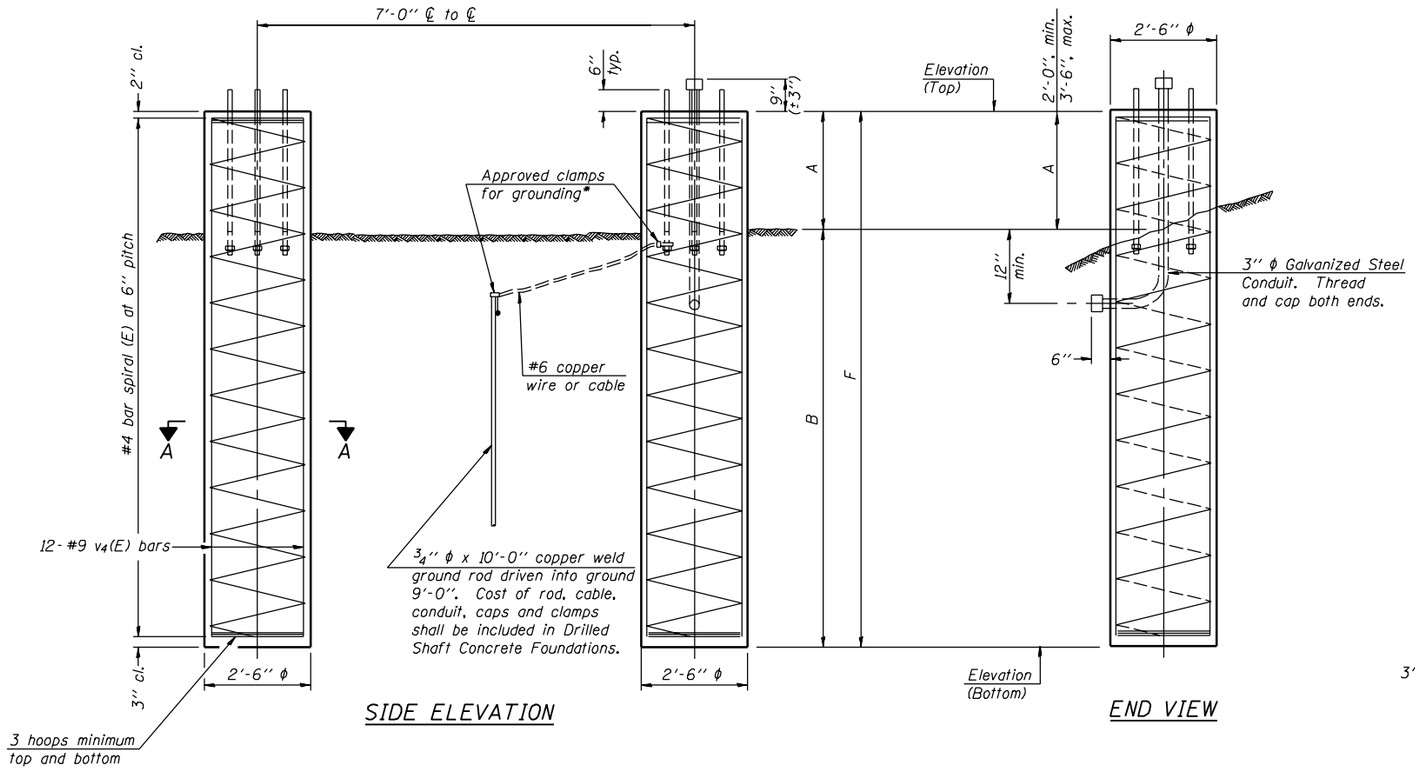
* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

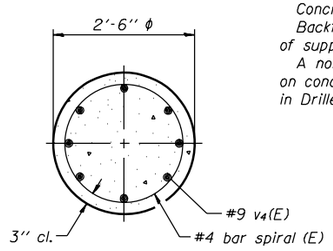
SHEET NO. -
- SHEETS

Contract #

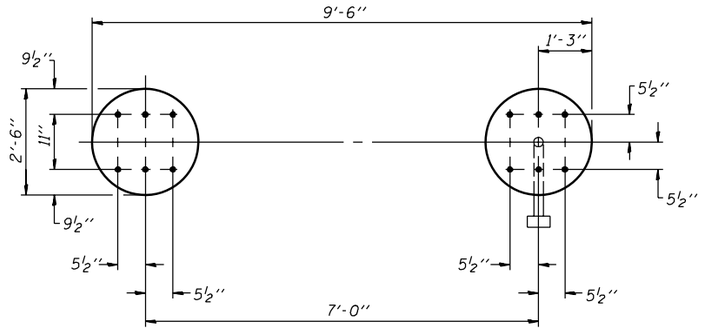


SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	———
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

Structure Number	Station		Left Foundation				Right Foundation					Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS4-F1 7/01/2006

DETAILS FOR 6" ϕ SUPPORT FRAME
TYPE I-A TRUSS

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

For anchor rod size and placement, see Support Frame Detail Sheet.

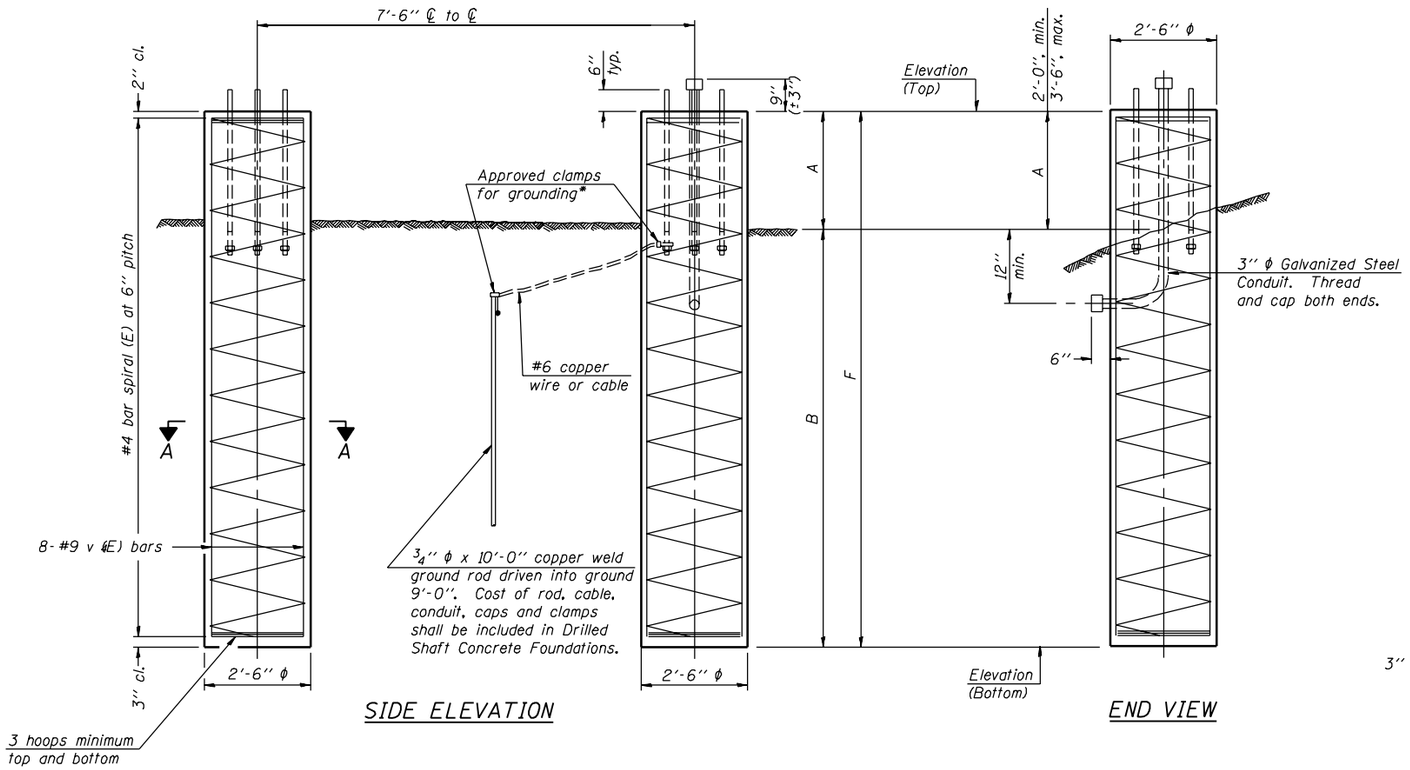
* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

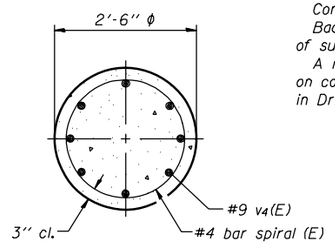
SHEET NO. - - SHEETS

Contract #



SIDE ELEVATION

END VIEW



SECTION A-A

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	16	#9	F less 5"	———
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

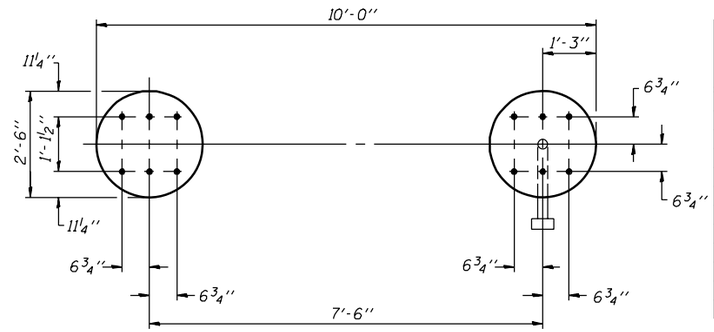
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



PLAN

Structure Number	Station	Left Foundation					Right Foundation					Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS4-F2 7/01/2006

DETAILS FOR 8" ϕ SUPPORT FRAME
TYPE I-A TRUSS

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

For anchor rod size and placement, see Support Frame Detail Sheet.

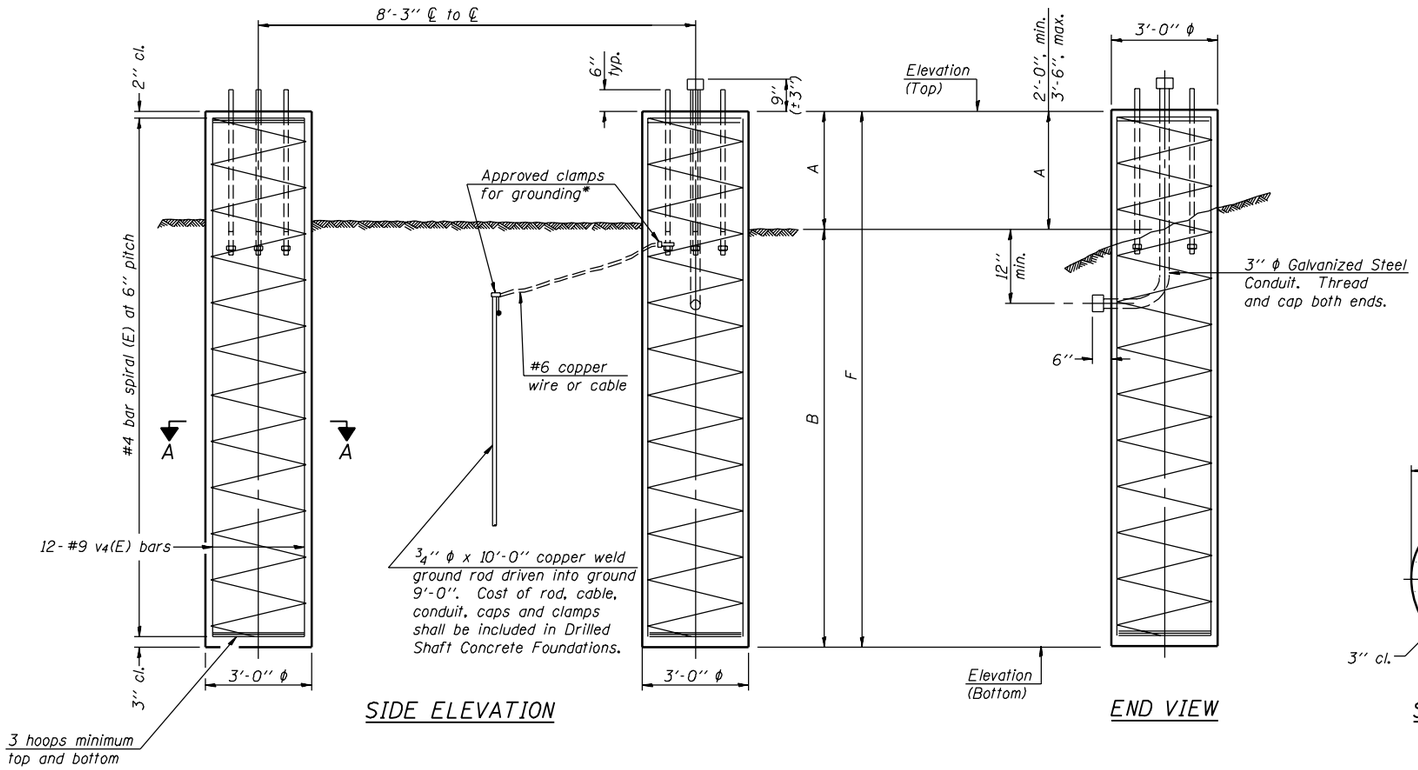
* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

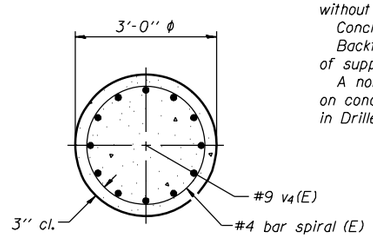
SHEET NO. - - SHEETS

Contract #

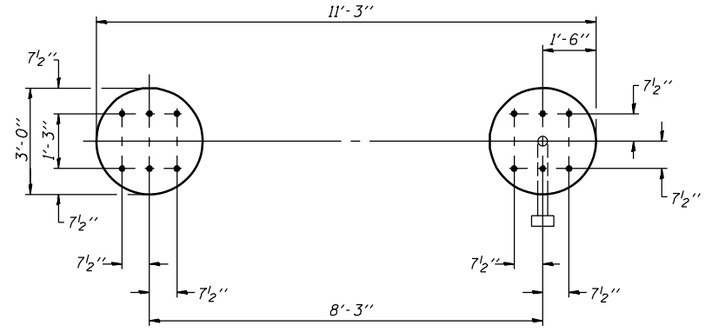


SIDE ELEVATION

END VIEW



SECTION A-A



PLAN

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	———
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

Structure Number	Station	Elevation Top	Left Foundation				Right Foundation					Class SI Concrete (Cu. Yds.)
			Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS4-F3 7/01/2006

DETAILS FOR 10" ϕ SUPPORT FRAME
TYPE I-A or II-A TRUSS

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

For anchor rod size and placement, see Support Frame Detail Sheet.

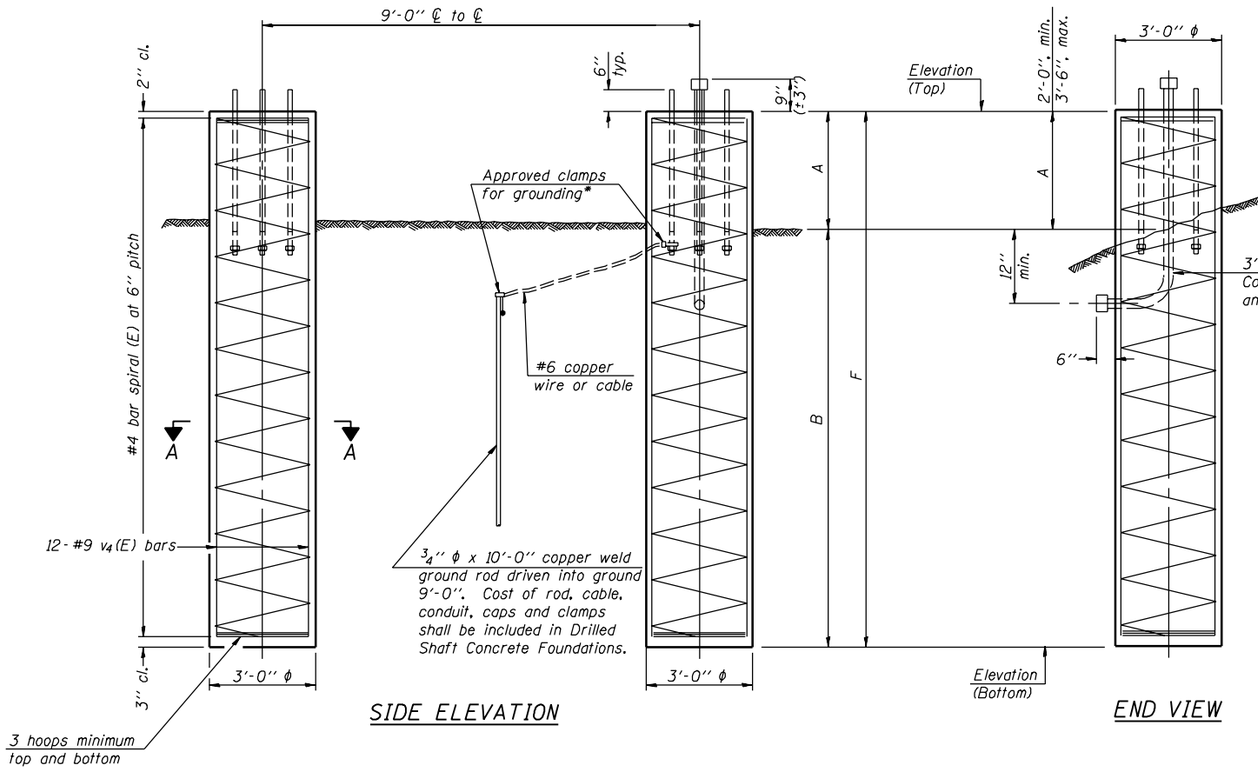
* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

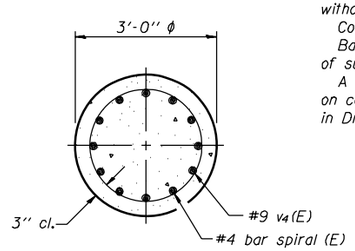
SHEET NO. -
- SHEETS

Contract #



SIDE ELEVATION

END VIEW



SECTION A-A

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	———
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

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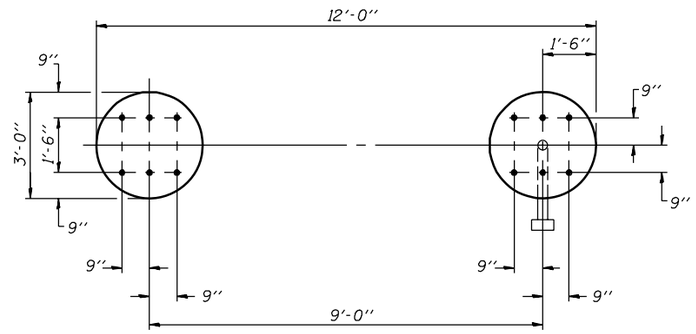
No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



PLAN

Structure Number	Station	Left Foundation					Right Foundation					Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	

OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

DETAILS FOR 12" ϕ SUPPORT FRAME
TYPE III-A TRUSS

OS4-F4 1-7-05

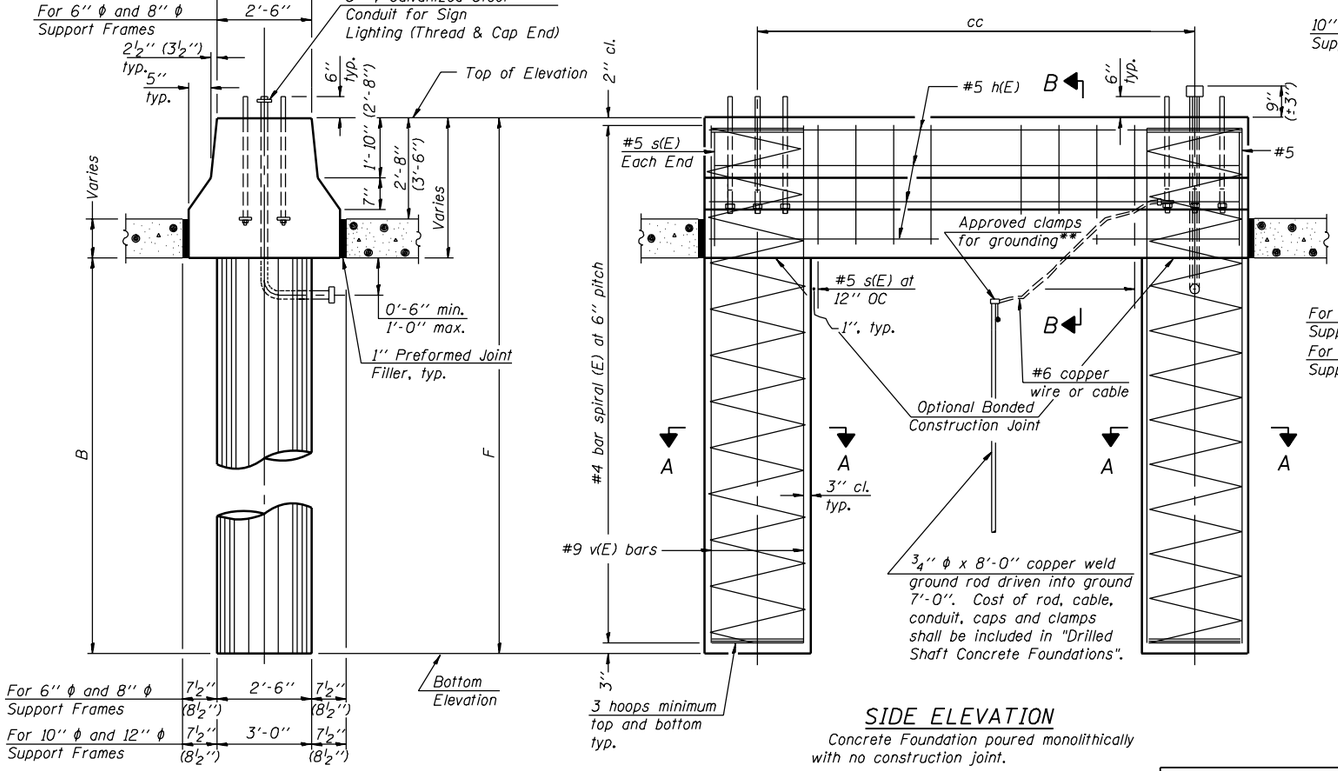
* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

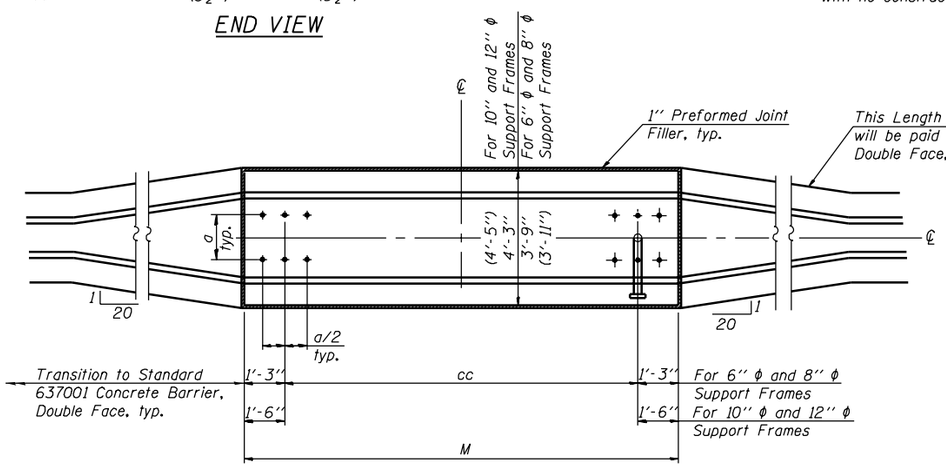
Contract #



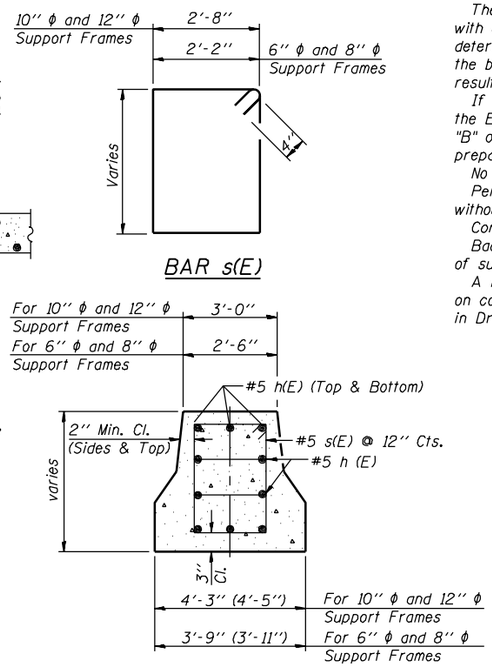
SIDE ELEVATION

Concrete Foundation poured monolithically with no construction joint.

END VIEW



PLAN



BAR s(E)

SECTION B-B

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12'' by the Contractor, ''as-built'' plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance.

Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

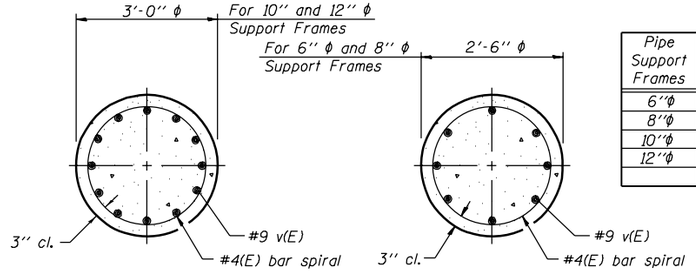
Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6'' below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape	
h(E)	10	#5	M less 4''	——	
s(E)	Varies	#5	Varies	□	6'' ϕ and 8'' ϕ Support Frame
v(E)	16	#9	F less 0'-5''	——	
v(E)	24	#9	F less 0'-5''	——	10'' ϕ and 12'' ϕ Support Frame
#4(E) bar spiral _ see Side Elevation					

All dimensions in parenthesis are for 42'' high barrier.



SECTION A-A

Pipe Support Frames	cc	M	a	a/2
6''ϕ	7'-0''	9'-6''	0'-11''	5½''
8''ϕ	7'-6''	10'-0''	1'-1½''	6¾''
10''ϕ	8'-3''	11'-3''	1'-3''	7½''
12''ϕ	9'-0''	12'-0''	1'-6''	9''

DESIGNED -	- 200
CHECKED -	EXAMINED
DRAWN -	ENGINEER OF BRIDGE DESIGN
CHECKED -	PASSED
	ENGINEER OF BRIDGES AND STRUCTURES

OS4-MED 7/01/2006

OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

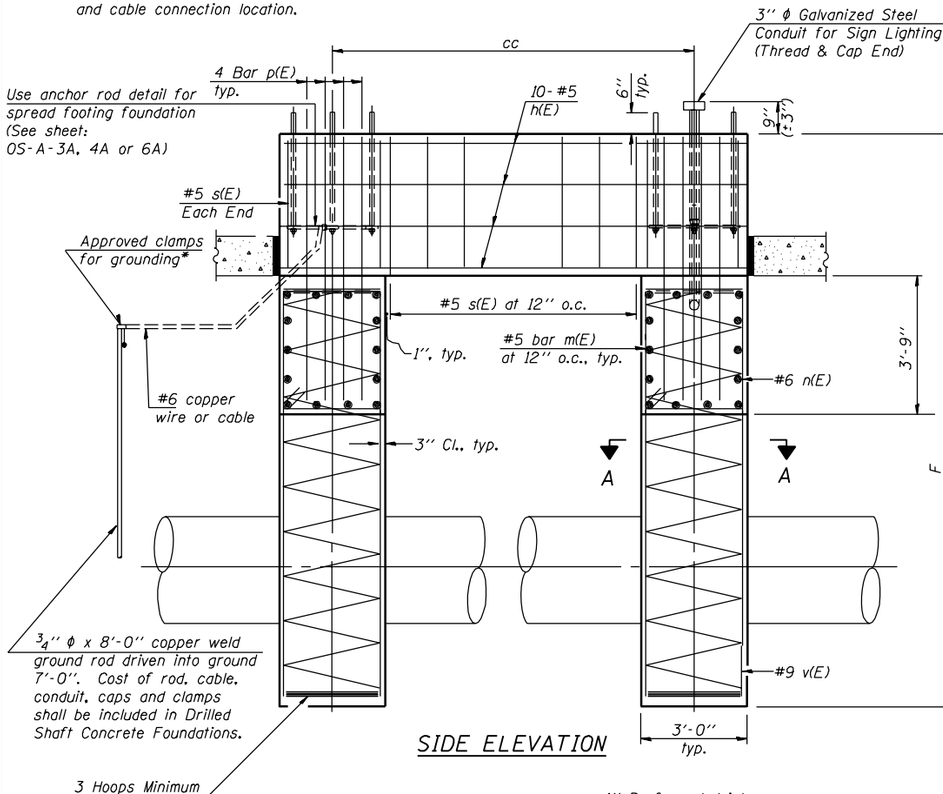
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

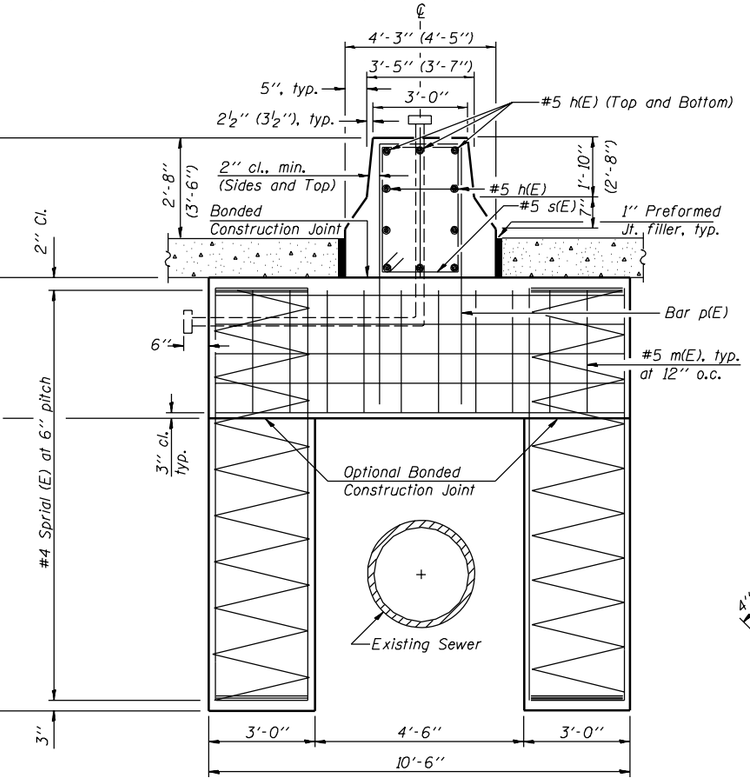
Contract #

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

** B = ½ the depth given in the Sign Structures Manual



SIDE ELEVATION



END VIEW
(Anchor rods not shown)

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

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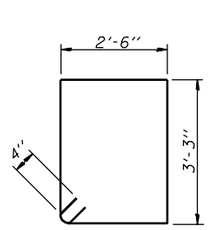
Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

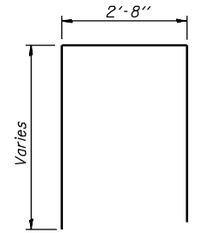
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

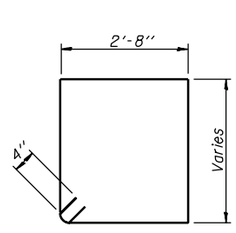
A normal surface finish followed by a Bridge Seat Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



BAR m(E)

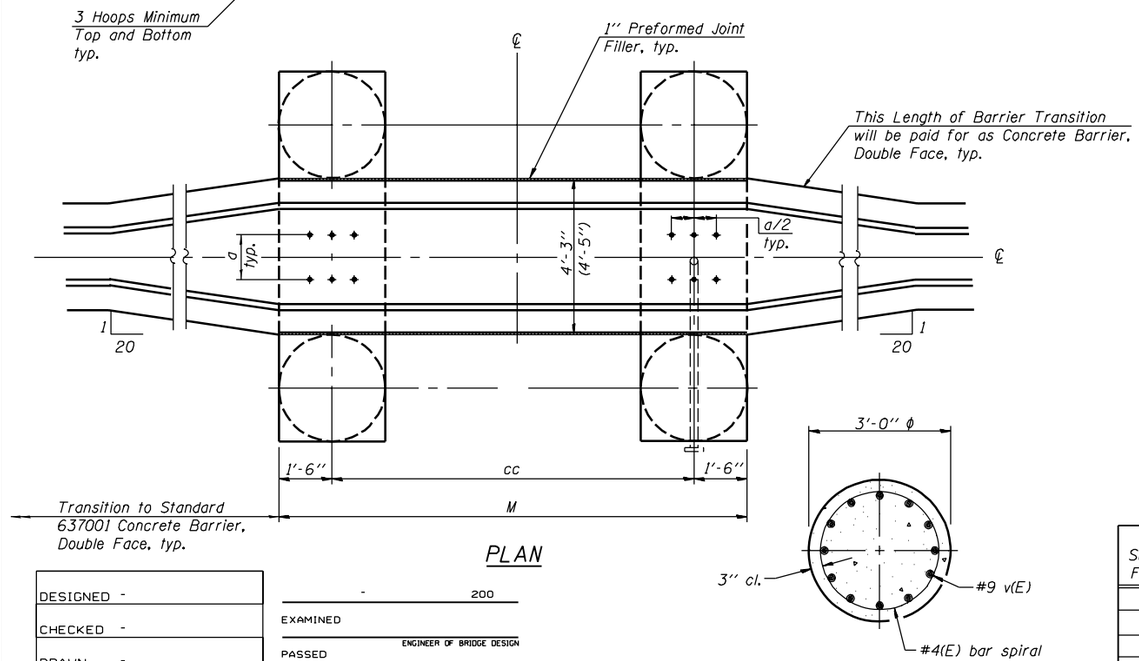


BAR p(E)



BAR s(E)

All dimensions in parenthesis are for 42" high barrier.



PLAN

SECTION A-A
(Typical for 4 Shafts)

Structure Number	Station	Left Foundation				Right Foundation				Class SI Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	

Pipe Support Frames	cc	M	a	a/2
6"ϕ	7'-0"	9'-6"	0'-11"	5½"
8"ϕ	7'-6"	10'-0"	1'-1½"	6¾"
10"ϕ	8'-3"	11'-3"	1'-3"	7½"
12"ϕ	9'-0"	12'-0"	1'-6"	9"

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	——
s(E)	Varies	#5	Varies	□
v(E)	48	#9	B less 0'-5"	——
m(E)	22	#5	12'-0"	□
n(E)	28	#6	10'-0"	——
p(E)	8	#5	Varies	⊓
#4 Bar Spiral - See Side Elevation				

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS4-MED2 7/01/2006

OVERHEAD SIGN STRUCTURES
MEDIAN SUPPORT FOUNDATION DETAILS II